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COMMENT: From Red Barn to Facility: Changing Environmental Liability to Fit the Changing Structure of Livestock Production

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LEXISNEXIS SUMMARY:
... As small farms give way to industrialized livestock production, Americans will need to reconsider their nostalgic support of an industry that no longer resembles that which provided a livelihood for previous generations of their families and that no longer reflects the Jeffersonian ideal. ... It concludes that integrator liability is, on balance, a positive and necessary means to address the environmental and socioeconomic costs of industrial livestock production. ... Environmentalists and small farmers have initiated a variety of legal efforts directed at imposing integrator liability for environmental pollution from confinement livestock operations. Both environmentalists and small farmers base their arguments for integrator liability at least in part on economic efficiency; that is, both argue that if concentrated livestock operations were required to internalize the pollution costs they have shifted to geographic regions surrounding CAFOs, their operations would be no more economically efficient than traditional farms. ... " Liability for pollution from animal waste under RCRA is not a well-developed area of law, in large part because the statute specifically exempts from coverage operations with NPDES permits, and most CAFOs must obtain such permits. ... If a grower does not install the technology necessary to prevent pollution from a confinement operation or attempts to raise more animals than the land can support, the local community will have to deal with the effects of pollution or remediate the site at its own expense if the grower is unable to pay for the cleanup. ...

TEXT:
[*797]

While the practice of sustainable farming is giving way to large-scale specialized agribusiness, n1 the image of the red barn farm surrounded by green pastures remains as strong as ever. n2 The red barn image persists in part because the largest and most powerful players in the industry need it to access the safe harbors Congress created to protect small family farmers facing the vagaries of weather and a unique market situation in which sellers outnumber buyers. n3 As small farms give way to industrialized livestock [*798] production, Americans will need to reconsider their nostalgic support of an industry that no longer resembles that which provided a livelihood for previous generations of their families and that no longer reflects the Jeffersonian ideal. Americans must look beyond the myths that industrialization necessarily evidences progress, that consumers benefit from artificially cheap food, and that the industrialization of agriculture is necessary to feed the world. They must look beyond the red barn image that serves as a useful device for agribusinesses and their political supporters to see the true source of their food and the ways in which industrialized agriculture threatens their quality of life.

The livestock industry provides the most obvious example of agribusinesses' co-opting of the bucolic image to their legal advantage. Confinement livestock production involves housing livestock in enclosed, tightly constructed buildings, most often in large numbers and with relatively little space in which the livestock can move. n4 Confinement producers escape most environmental regulation by suggesting that they can be trusted to voluntarily protect the environment because their farming practices are simply a modernization of the sustainable farming practices of traditional farms. n5 However, confinement and traditional methods of livestock production have little more in common than the species they produce, a fact the corporate backers of confinement production seek to obscure. In reality, confinement livestock production is in many respects more akin to manufacturing than to traditional, sustainable farming.

Various pressures combined to effect the relatively rapid shift from the traditional to the confinement model of livestock production, but the strongest pressure came from the vertical integration of food production. n6 The recent transformation of pork production provides an apt example. Both corporate pork producers and some large, independent farmers initially adopted the technology to produce hogs in confinement buildings in the 1970s and 1980s, but most farmers continued to produce hogs as they had in the past. However, when meatpackers began to enter into production contracts with individual farmers to procure their hog supplies rather than buying on the open market, farmers suddenly had access to the capital [*799] necessary to build industrial-scale facilities because lenders saw the production contract as a source of reliable income. Increasing numbers of farmers began to enter into production contracts, which required that they adhere to the confinement production model.

Most processors have found the risks of production - initially animal sickness and mortality, and later environmental degradation - too onerous and have used their superior bargaining position to quarantine those risks through the contract. These contracts leave the farmer to bear all of the liability for environmental pollution and often leave the public with an undercapitalized responsible party. n7 Farmers who choose to run confinement operations are already liable for the environmental degradation that results from their operations. But vertical integrators should be held jointly liable because of the control they exercise over these industrial facilities and because they benefit from what can be classified as an inherently hazardous activity.

The judiciary, legislature, and executive agencies, at both state and federal levels, have recently created inroads to hold vertical integrators responsible for the environmental problems created by industrial-style livestock production. These attempts to require integrators to internalize the pollution costs of their businesses have resulted in part from a burgeoning relationship between environmentalists and small farmers, who often have viewed each other with great skepticism. Brought together by a common challenge, the groups have forged a sometimes uneasy bond. Their combined efforts to expose the costs of separating ownership and production of livestock offer an alternative to the industrial model.

The United States is in the relatively early stages of providing for integrator liability. We must move quickly. The number of small and medium farms is dwindling. If integrated confinement-model farms turn out to be economically unsustainable once they properly internalize all their costs, we will need to rebuild our base of smaller traditional farms.

Starting that process while we still have some small and medium farms will reduce transition costs, both financial and social.

We must also evaluate carefully. Who stands to gain from integrator liability, in the short term and in the long term? How - and on to whom, growers or consumers - will integrators attempt to shift newly emerging environmental costs? In what ways will integrator liability affect the structure of livestock production? Will environmental protection come at the expense of small farmers whose sustainable agricultural practices provide an alternative to specialized confinement livestock operations? At base, who will be the winners and losers of integrator liability? This Comment addresses and contextualizes these questions. It concludes that integrator [*800] liability is, on balance, a positive and necessary means to address the environmental and socioeconomic costs of industrial livestock production.

To set the stage for my argument, I begin, in Part I, by describing the shift from sustainable farming practices in livestock production to a vertically integrated confinement model. In Part II, I detail the immediacy and gravity of the environmental and public health effects of concentrated livestock production. In Part III, I review recent attempts, through legislation, agency regulation, and litigation, to hold vertical integrators responsible for the pollution confinement livestock production causes. In Part IV, I discuss how integrator liability fits within the larger legal context. Finally, in Part V, I turn to the implications of integrator liability for the environment and for small family farmers.

I
The Trend Toward Integration in Hog and Poultry Production

Farmers are particularly vulnerable relative to producers in other industries for three reasons: (1) the level of production is unstable because of exogenous factors that are difficult or impossible to control, including weather, diseases, and pests; (2) the combination of steady demand and variable supply leads to profound year-to-year price fluctuations; and (3) "the geographic distance between rural producers and urban consumers has traditionally placed farmers at the mercy of marketing middlemen." n8 Although farmers have always experienced varying degrees of success and failure, not until relatively recently has the viability of middle-class, medium-sized farms been so threatened. n9

As a result, a significant economic division among farmers is sharpening ideological differences. n10 There is a growing sense of distrust between [*801] independent farmers and those who have entered into relationships with large agribusinesses. n11 This distrust results in part from the difficulty of maintaining a semi-integrated industry. As the number of livestock producers entering into production contracts increases, so too does the number of animals a contract grower produces. n12 These increases, in turn, exponentially decrease the number of independent producers, rendering the spot market all but unviable. n13 Between 1994 and 2001, the number of hog farms in the United States decreased from more than 200,000 to just over 80,000, despite relative stability in the number of hogs. n14 About 14% of hog producers quit producing hogs between 1998 and 1999 alone. n15 At the same time, between 1993 and 2001, the percentage of hogs sold on a contractual basis increased from 10% to 72%. n16 A similar shift occurred thirty years earlier in the organizational structure of poultry production. n17 Poultry [*802] production today is almost entirely vertically integrated through contracts between growers and processors. n18

Many factors external to and beyond the control of those involved in agriculture have contributed to the decreasing number of independent farmers in the United States. n19 But other factors relate primarily to the restructuring of agriculture itself. These factors include (1) increasing consolidation among buyers of agricultural commodities, (2) greater vertical integration and use of production contracts, and (3) integration of various agricultural sectors once separately controlled, including the development of large agribusinesses that control the full range of food production, from patented seed and pesticide technology, to livestock and crop production, to meat and plant food processing. I discuss the first two issues in Parts I.A and I.B; the third is beyond the scope of this Comment.

A. Horizontal Consolidation

Horizontal consolidation is the merger with or acquisition of an entity by its competitor, both of which serve the same market function. In the case of livestock production, horizontal consolidation has its most dramatic effect at the meat producer and processor levels, but integration at the retail level also has important, though less direct, implications for independent farmers. Horizontal consolidation of buyers of livestock and livestock products means less competition for farmers' livestock and thus lower prices for producers generally and a greater opportunity for the remaining buyers to manipulate the market. Thus, aside from the externalities of pollution and social costs, the increasing size of producers also creates opportunities for special deals with buyers not available to independent producers. n20

[*803] The proliferation of mergers and acquisitions in agribusiness, mirroring developments in other economic sectors, has further exacerbated the inherent problems of market dominance and insufficient competition in the livestock industry. n21 Today, just four meat processors slaughter 69% of cattle, 82% of steers and heifers, 32% of cows and bulls, and 56% of hogs. n22 The chicken giant Tyson bought out IBP and now controls 33% of the chicken market, 28% of the beef market, and 18% of the pork market. n23 Smithfield, the self-proclaimed largest hog producer and pork processor in the world, acquired many processors in the 1980s and 1990s and bought controlling interests in numerous overseas processing firms. n24 In 1999, when Smithfield bought out Murphy Farms, it acquired 325,000 sows, and when it bought out Farmland in 2003, it acquired Farmland's 36,000 sows. n25

These acquisitions have yielded little response from the U.S. Department of Justice. n26 Some agricultural economists argue that antitrust laws lack teeth in the agriculture industry because three different agencies are charged with enforcing the laws: the Antitrust Division of the Department of Justice, the Federal Trade Commission, and, to a lesser [*804] degree, the U.S. Department of Agriculture (USDA). n27 Others argue that the courts have not adequately enforced antitrust laws in general, and that they have narrowly construed the scope of antitrust laws written especially to accommodate the unique economic situation of agriculture. n28 But questions associated with antitrust law enforcement may run deeper, to a philosophical questioning of the desirability of antitrust legislation itself, in agriculture and in the larger economic system. n29

Horizontal consolidation in livestock production and processing exacerbates the difficulties livestock producers face in marketing livestock. Even without corporate mergers and acquisitions among livestock processors, producers were in a weaker bargaining position relative to buyers because competition among the many sellers naturally lowered the market price of livestock for the relatively few buyers. n30 With buyers increasingly consolidating, however, livestock producers now often do not have any choice about where to sell their livestock because some evidence suggests that the few buyers that remain carve out regions in which they will buy rather than compete against each other. n31 With few opportunities remaining to consolidate at the processor level, corporations began to look to vertical integration as a way to streamline their operations and manage their risks.

B. Vertical Integration

Vertical integration is thought to lower the costs of production because it eliminates profit skimming at various stages. Vertical integration within agriculture might involve, for example, a meatpacker raising [*805] livestock. n32 A major component of vertical integration in animal agriculture is meat processors' use of production contracts to procure livestock supplies. n33 Rather than rely on spot markets, as in the past, packers now prefer to contract with farmers to increase their control over the supply, pricing, and timing of receipt of live animals. Packers also prefer more uniform livestock to ease processing and can ensure such consistency by controlling genetics, the nutrition regimen, and the use of subtherapeutic levels of antibiotics.

Livestock production contracts offered by vertical integrators are essentially standard form contracts with the same basic provisions. n34 The integrator provides (and continues to own) the animals and supplies the feed (including additives), medication, and veterinary care. n35 The grower supplies buildings built to the specification of the integrator, provides care according to the integrator's guidelines, agrees not to enter into production contracts with other integrators concurrently (or to allow other animals onto the farm, in many cases), and manages the animal waste and dead animals in compliance with all state and federal environmental laws. The grower also often agrees to indemnify

the integrator for any claim brought against it related to environmental compliance, including the integrator's attorney fees. n36

Although some economists argue that integration via production contracts or other means is important to increase accountability n37 and [*806] efficiency n38 in food production (and thus to lower food prices for consumers n39), others have raised concerns about vertical integration. n40 First, they suggest that unbalanced production contracts allow processors to attain the cost savings and control integration promises while shifting the environmental costs associated with livestock production, first onto growers and ultimately onto the surrounding local community. n41 Second, they argue that this kind of organization decreases quality control within the food industry by eliminating market checks at each phase (e.g., when livestock producers purchase breeding animals or insemination products, when processors purchase livestock, and when retailers purchase processed meat). n42 Third, they suggest that allowing a few large conglomerates to control the food industry puts consumers at risk, in terms of both food safety and price, because of the companies' market share control. n43 Fourth, they have shown that packer ownership of animals is a means for packer-to-packer trade, allowing meat processors to "both affect...the market price and communicate [*807] that price to each other," at the expense of independent producers. n44 Finally, they point to negative sociological and socioeconomic effects including the division of previously cohesive communities, the disproportionate siting of confinement operations near poor communities, the loss of African-American-owned land, the devaluation of property neighboring confinement operations (leading to a domino effect of land sales), the smaller percentage of money spent to buy local products when livestock producers participate in integrated systems, and the increased infrastructure costs local communities bear when livestock production moves from a traditional to an integrated and consolidated model. n45 In more provocative language, they see the use of contract production in agriculture as diminishing independent farmers to serfs in a feudal system with agribusinesses as the lords. n46

The USDA has promoted vertical integration as a means of increasing consumer access to agricultural products such as chicken. n47 As mentioned, supporters of vertical integration in agriculture suggest that consumers will benefit from the lower prices that result from the increased efficiency of integrated production. n48 However, although the retail price of food is one factor in evaluating the impact of production contracts, countervailing factors may outweigh any perceived benefit. In an efficient economic system, food prices reflect their true costs, including costs of the pollution that [*808] results when insufficient land is available for disposal of animal waste. n49 In addition, imbalances in information and bargaining power between the parties may lead to inefficient results from the contracts themselves. n50

Horizontal consolidation and vertical integration have fundamentally changed livestock production, and the fallout is not merely economic. To secure as wide a profit margin as possible, vertical integrators have imposed a large-scale confinement livestock operation model on their producers. This confinement model contrasts starkly with traditional, sustainable livestock production, which involves a closed nutrient system. In the traditional model, growers use livestock waste to fertilize row crops and pastures that in turn produce food for the livestock. Traditional farms tend to be smaller than confinement operations in terms of the number of animals produced but larger in terms of acreage. n51 They generally provide pasture for their animals when weather permits, and provide indoor-outdoor pens in colder climates. When animals are not pastured, the producer collects the waste and spreads it on cropland as fertilizer.

In contrast, a confinement building may house well over one thousand pigs, n52 and the smallest confinement operations usually consist of at least three or four buildings. n53 Large facilities may have as many as thirty [*809] buildings, and often many such facilities are concentrated within a particular geographic area. n54 The animals are kept on slatted cement floors that allow the waste to fall through to a holding area below the building. Typically, because concentrated livestock production is extremely specialized, producers do not own agricultural land (i.e., land on which row crops or alfalfa would be grown) where waste could be used as fertilizer. Instead, when the waste accumulates, it must be pumped to a waste storage lagoon, where it is held until it is applied to what little land is available. The number of acres available on which to spread animal waste differs dramatically - by about one hundred acres - between independent and contract producers. n55 This statistic is even more significant when one considers that contract producers generally raise many more animals than do independent producers, such that fewer acres must absorb the

waste of many more animals. In fact, each acre on the most densely populated operations must absorb the waste of 16.7 hogs, compared with the waste of just 1.4 hogs on the average traditional farm. n56

Vertical integration through the use of production contracts has been a driving force in making confinement livestock production the dominant model. Although small farmers may worry about various provisions in production contracts, particularly about the underlying loss of independent decision making inherent in some of the provisions, n57 environmentalists focus on integrators' attempts to avoid liability for the pollution that results from the confinement operations that integrators have encouraged. n58 Environmentalists' focus on integrators' responsibility for pollution is based in part on the fact that integrators are better able than are individual [*810] growers to pay for the technology necessary to prevent pollution. n59 But it also is based on integrators' control over much of the decision making related to livestock production, in particular their use of that control when it is advantageous, and their denial that such control exists when it is disadvantageous. n60 Part II describes the implications of confinement livestock production for the environment and for public health and vertical integrators' role in exacerbating these problems.

II
The Environmental Effects of the Concentrated Livestock Production Promoted by Vertical Integrators

As the numbers of animals in confinement have multiplied, so have the environmental repercussions of concentrated livestock production. n61 Debates on whether to either include or exclude livestock production from environmental law coverage have also gained fervor. Such debates often pit rural neighbors against each other. n62 Some issues are hardly new: livestock waste smells, and animals allowed contact with a clean water source will soil it. Livestock producers using both traditional and confinement methods must deal with these issues. But research suggests that the extreme practices of confinement livestock production have made the question of environmental regulation of farms merely a political argument. [*811] There is little question that the environmental degradation from confinement livestock production exceeds that from traditional production and is akin to degradation from manufacturing processes.

The most obvious problem associated with concentrated livestock production is how to dispose of the vast amounts of waste the livestock produce. Traditional livestock farming has generally escaped environmental law enforcement because individual farms were thought to produce a minimal amount of pollution and to be too numerous to regulate. However, concentrated animal feeding operations (CAFOs) are discrete, identifiable sources of vast amounts of waste. A hog production facility confining 750 hogs produces 9750 pounds of waste per day, n63 which is equivalent to the amount produced by a town of just under 2500 people. n64 A CAFO carrying 500,000 hogs would produce 6.5 million pounds of waste per day, or an amount comparable to that produced by a city of 1.625 million people (larger than Philadelphia, the fifth largest city in the nation). n65 Despite evidence suggesting that animal waste is at least as potentially harmful to humans and the environment as is human waste, animal waste is not required to undergo the wastewater treatment mandated for human waste. n66

This Part details some of the most egregious environmental harms resulting from confinement livestock production. I begin with a discussion of how confinement livestock production affects water quality and then turn to its effects on air quality. These water and air quality issues in turn have important implications for human health.

A. Concentrated Livestock Production and Water Quality

Perhaps the most profound environmental effect of confinement-style livestock production, and arguably of livestock production of any kind, is water pollution. Wastes resulting from both traditional and confinement livestock production generally are spread on fields. n67 Unless the waste is incorporated into the soil, rain may wash it directly into surface waters. Applying waste to frozen fields also increases the probability of runoff pollution. n68 Because runoff pollution problems are not unique to confinement [*812] operations, some commentators have speculated that water pollution is not more likely to occur with confinement than with traditional methods of growing livestock, and that if there were fewer farms the sources of pollution could be more easily regulated. n69 However, the massive discharges resulting from the overflow of lagoons, the seepage from permeable lagoons, and the overapplication of waste to land associated

with concentrated livestock production likely make unregulated confinement operations more environmentally dangerous than traditional farms. n70

Reports of water pollution from confinement operations are legion. The nation's leader in pork production, Iowa, experienced at least ninety-six reported fish kills from animal waste between 1995 and 2004. n71 In North Carolina, the magnitude of releases from confinement operations was the impetus for a moratorium on large-scale hog confinement operations in the mid-1990s, and pressures to regulate confinement operations in floodplains increased because of major releases of waste following Hurricane Floyd. n72 Despite increased regulation in the state, more than 2000 releases from confinement operations in 2002 reached surface waters. n73 North Carolina also experienced the largest known release from a confinement operation in 1995, when a lagoon overflowed, spilling twenty-five million gallons of hog waste on a road, on a neighboring field, and into a river. n74 For perspective, the Exxon Valdez oil spill involved half that volume of waste material. n75

B. Concentrated Livestock Production and Air Quality

Traditional livestock farming methods result in odors throughout the countryside, but the relatively small amount of manure spread over a relatively large number of acres usually makes the odors more annoying than [*813] harmful. Researchers generally consider odor an air pollutant, n76 but the Clean Air Act (CAA) does not specifically address odors. n77 Odor, however, is not the only air-related environmental concern. When Congress passed the CAA in 1970, it had no reason to suspect that animals could cause air pollution rising to a level that would justify government regulation. Today, the increasing use of large confinement operations in livestock production makes it easier to identify and measure the air pollution animals create because the sources are obvious: waste lagoons and exhaust systems from confinement buildings are clear sources of air pollution. n78

As hog waste breaks down, it releases ammonia and hydrogen sulfide. n79 These chemicals pollute the air and potentially contaminate surface waters when they settle out of the air through atmospheric deposition. n80 Confinement livestock operations also release volatile organic compounds and particulate matter. n81

In response to a large number of health-related complaints from neighbors of confinement operations, researchers have studied the effects of CAFO-related pollutants on those who live near confinement operations. n82 The illness and mortality associated with water pollutants such as nitrates, antibiotics, and heavy metals and emissions of ammonia, hydrogen sulfide, particulate matter, and volatile organic matter from confinement operations underscore the need for regulation. n83 For example, researchers have linked excessive nitrates in water supplies to [*814] methemoglobinemia (blue baby syndrome), central nervous system developmental defects, and miscarriage. n84 Anecdotal accounts by medical professionals suggest hydrogen sulfide can cause mild cerebral dysfunction or even chemical brain damage in those living near confinement operations. n85 Formal studies confirm that exposure to hydrogen sulfide, ammonia, and dust is associated with asthma, chronic bronchitis, and declining lung function among farm workers as well as children living on farms. n86 Increased rates of asthma attacks requiring hospitalization and respiratory symptoms have been associated with proximity to CAFOs. n87

These findings point to the need for more widespread studies because animal waste pollution probably cannot be contained in a local rural area. Although the effects - unswimmable lakes and streams, undrinkable water - are most profound in livestock-producing areas, pollution from confinement livestock production is not confined to these places. The City of Tulsa has experienced profound difficulties in providing unpolluted drinking water to five hundred thousand residents because of the increase in industrialized livestock production in the area. n88 The combined runoff of animal waste and fertilizers used for crop production have created a deadzone in the Gulf of Mexico stretching approximately 20,000 square kilometers that supports no marine life. n89 Because animal waste pollutants have the potential to broadly affect the health and well-being of Americans, they must be adequately regulated.

III

Vertical Integrators' Liability for Pollution from Confinement Livestock Production

Environmentalists and small farmers have initiated a variety of legal efforts directed at imposing integrator liability for environmental pollution from confinement livestock operations. Both environmentalists and small farmers base their arguments for integrator liability at least in part on economic efficiency; n90 that is, both argue that if concentrated livestock operations were required to internalize the pollution costs they have shifted to [*815] geographic regions surrounding CAFOs, their operations would be no more economically efficient than traditional farms. n91 Thus, any profits greater than those garnered by traditional farmers resulting from economies of scale would be offset by the costs of preventing and redressing pollution. n92 The greatest cost for which integrators do not currently account is that of proper, nonpolluting disposal of livestock waste. Disposal costs might include treatment of the waste or transportation costs if the CAFO does not have sufficient acreage to handle the waste. n93 Common law and various environmental laws serve as legal bases for requiring confinement operations to internalize these costs. In this Part, I examine these legal frameworks and the outcomes of early cases brought against vertical integrators.

A. Integrator Liability Under the Common Law

Although Congress has enacted various federal environmental laws, the common law is often the most effective means to control and ultimately prevent pollution, particularly in the agricultural context. The most frequent common law causes of action against confinement operations are nuisance and trespass. Neighboring landowners usually base their suits on the nuisance of odors emanating from the large accumulations of animal waste. They may also sue confinement operations for trespass when either air or solid wastes produced by livestock cross onto their properties. As confinement operations have increased in size, the number of lawsuits raising these claims has also increased, even in relatively isolated areas long dominated by agriculture and livestock production.

In response to these suits - initially perceived to be brought predominantly by exurbanites who found rural life less pastoral than they had expected - every state passed right-to-farm laws. n94 Under many right-to-farm laws, to prove nuisance resulting from activities on property within a designated agricultural area, one must show that the operator has acted negligently, has acted in violation of a state or federal law, or has failed to act in [*816] accordance with "generally accepted management practices." n95 Although statutory language varies by state, at base those engaging in "normal" farming practices are protected from what some perceive as harassing lawsuits. n96 The Iowa Supreme Court has held that Iowa's right-to-farm laws effect an unconstitutional taking of neighbors' property interests under a state constitutional analysis (i.e., that the state statute's elimination of the right to sue constitutes an easement, for which the neighboring property is entitled to just compensation), n97 but right-to-farm laws remain potent in other states. n98 Because right-to-farm laws generally protect even future expansion or changed operations of a facility, what constitutes normal farming practices has become the most significant issue. n99 Has the concept of "normal" agricultural practices evolved as livestock production has changed, so that it now encompasses the industrial model, or does it refer to the traditional closed nutrient system of agriculture? This is the unanswered - if not unanswerable - question at the basis of most disagreements about the regulation of agriculture.

Nuisance and trespass claims may provide the cleanest doctrinal means to hold vertical integrators liable. Another common law concept, vicarious liability, provides a link between nuisance and trespass and the integrators who exercise control over the livestock production process. However, vicarious liability, by which one may be held responsible for the wrongdoing of another, n100 does not easily fit the integrator-grower relationship, which straddles the boundary between an employer-employee relationship and a business-independent contractor relationship. n101

Cases from several states offer good examples of how common law liability for nuisance and trespass may reach integrators through vicarious liability when the integrator exercises control over the operation. In Overgaard v. Rock County Board of Commissioners, nuisance, trespass, [*817] and negligence claims by neighboring landowners against the owner of hogs (as well as the growers of the same hogs) survived a motion for summary judgment. n102 The court found that the integrator's ownership of the hogs, along with its significant control over the design and construction of the confinement building, was sufficient to make the integrator liable for nuisance, trespass, and negligence. n103 In Tyson Foods, Inc. v. Stevens, the Alabama Supreme Court upheld a jury's finding that a grower was not an independent

contractor but rather an agent of the vertical integrator. n104 The trial court had considered evidence of Tyson's control over the operation, including determining the locations and sizes of the confinement buildings and the waste-management system, arranging for financing for the grower, inspecting the operation almost weekly, recommending waste-management solutions, and providing hogs, food, medication, and veterinary care. n105 Essentially, the only contributions the grower made (aside from financing the property and the buildings) was to feed and water the animals through a mechanized system and to dispose of the waste and dead animals. n106 Thus, the court found that the integrator had sufficient control to warrant vicarious liability.

The court in City of Tulsa v. Tyson Foods, Inc. used a slightly different approach to find an integrator vicariously liable. n107 There, the court found insufficient facts to evaluate whether growers were characterized more accurately as independent contractors or employees of integrators. But the court found that integrators would be liable as a matter of law if the jury found the growers liable. The court reasoned that integrators were contracting for work that was likely to involve trespass or nuisance. n108 Because "poultry waste "necessarily follows' from the "growing' of poultry," and because integrators were aware that land application of poultry litter was polluting the watershed (as evidenced by their attempts to educate growers about the problem), integrators were vicariously liable for the "likely result" of nuisance and trespass claims against the growers. n109 These cases demonstrate that integrators may be held liable for nuisance, negligence, or trespass through vicarious liability if they exercise sufficient control or if they contract for work likely to involve nuisance or trespass.

Although common law claims are often effective in controlling pollution, their usefulness in protecting the environment is limited by the [*818] requirement that they be brought by adjoining or nearby landowners. Thus, in Neuse River Foundation v. Smithfield Foods, Inc., the court found that, under the North Carolina constitution, environmental-advocacy-group plaintiffs do not have standing to bring claims for nuisance and continuing trespass because the state does not recognize their alleged aesthetic and recreational injuries as injuries in fact for these common law causes of action. n110

Traditional common law principles may establish liability for integrators when operations emit air pollutants or discharge waste in a way that compromises the property rights of their neighbors. Odor, which is perhaps the leading issue of dispute among neighbors of CAFOs, is best approached through these common law claims because the Clean Air Act and other environmental laws do not directly regulate odor but only emitted substances that can cause odor. n111 There are, however, inherent limits to the common law: right-to-farm statutes may eliminate such claims against both growers and integrators, and only neighboring property owners may bring these claims. n112 Therefore, while integrator liability for nuisance and trespass is an important safeguard to protect neighbors of CAFOs, ultimately it is beneficial from a broader environmental perspective to address integrator liability through federal environmental laws.

B. Integrator Liability Under State Statutory Law

Against the background of state common law, state legislatures have attempted to deal with the rise of vertical integration through production contracts and the corresponding decrease in the number of independent farmers. These efforts have produced varying results. The most direct attempt to hold agricultural integrators responsible for pollution resulting from livestock production is South Dakota's 1998 statute making owners of livestock jointly and severally liable, along with those who raise the livestock, for any environmental harms resulting from the arrangement. n113 Despite the great potential for controversy posed by the statute, there are neither reported cases nor academic assessments of it. One possible reason for this seeming lack of interest is that the statute is limited: to make out a claim under the statute, one must prove that that the integrator acted negligently. Other states' attempts to restrain agricultural integration have [*819] encountered legal challenges and have failed to specifically address environmental concerns. n114

The few states to pursue direct legislative limits on vertical integration are clustered in the upper Midwest, where confinement livestock production has gained a foothold only relatively recently. n115 Southern and Western states are unlikely to act on this issue because in these regions there is less political pressure to hold integrators liable.

State statutes and common law causes of action provide a means to ensure that integrators are held liable for the pollution that results from confinement livestock production, but they are inherently limited. Some federal environmental laws offer additional avenues to reach integrator liability by eliminating the common law requirement of showing fault.

C. Integrator Liability Under CERCLA and EPCRA

One federal environmental law that holds promise for ensuring that polluting CAFO owners, and the companies with which they contract, begin to take seriously their obligation to prevent the release of hazardous substances is the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). n116 Enacted in 1980, CERCLA has two aspects that are important in the integrator liability context: (1) it establishes a means for gathering information on hazardous waste sites by requiring polluters to report the release of hazardous substances and (2) it provides liability for parties who are potentially responsible for the release of hazardous substances, including owners and operators (past and present), those who arrange for the disposal of hazardous wastes, and those who transport hazardous wastes. CERCLA liability results when there is a release or threatened release of a hazardous waste. n117 Courts have construed liability broadly, finding that Congress intended, first and foremost, to provide the means to clean up hazardous waste. n118

CERCLA is a seemingly useful statute to recover costs associated with cleaning up property contaminated by CAFO waste, n119 but it contains [*820] an exemption for the "normal application of fertilizer." Land application of animal waste has been thought to fall within that exemption. n120 But CERCLA also contains a rarely litigated hazardous substance release notification provision that requires owners and operators of pollution-generating businesses to report releases of certain hazardous substances when they exceed a threshold set by the statute (a "reportable quantity"). n121

The Emergency Planning and Community Right-to-Know Act (EPCRA), designed to inform the public about potentially harmful releases of hazardous substances and to create a more efficient means to respond to emergencies involving such releases, contains a similar emergency notification provision. n122 Livestock producers are not exempt from the reporting requirements; Congress's inclusion of other agricultural exemptions in the Acts suggests it did not intend to exempt agricultural releases from the reporting requirements. n123

The reporting requirements of both statutes have called attention to the pollution associated with confinement livestock production. A federal district court in Kentucky found Tyson Chicken (a subsidiary of Tyson Foods) liable under these reporting requirements for ammonia released from confinement operations under contract with Tyson. n124 Relying on language from United States v. Bestfoods, n125 the court found that Tyson Chicken, a vertical integrator, fit the definition of "operator" under CERCLA. It stated:

Tyson Chicken is clearly in a position of responsibility and power with respect to each facility and is in a position to make a timely discovery of a release, direct the activities that result in the ammonia releases, and has the capacity to prevent and abate the alleged environmental damage. n126

The court's ruling is in line with decisions finding that general CERCLA liability results from the ability to control the environmental operations of a seemingly independent polluting entity. n127 CERCLA mandates that those in [*821] charge of a facility report releases. n128 Although the statute does not make clear how to determine who is a person in charge, courts have construed the phrase to apply to one who "exercises "supervisory control' - though not necessarily "sole control' - over a facility, including the "operator' of the facility." n129 Integrators fit the definition of a person in charge: they exercise control over the building design, the ventilation system, and the number of animals produced (and thus indirectly control the amount of waste produced); perhaps most important, they monitor and inspect the facilities of growers. n130 During these inspections, integrators often recommend that growers increase the ventilation rate and may

even operate the ventilation equipment themselves if necessary to ensure that gases with the potential to harm livestock are removed from the facility. n131 Because of the control integrators exercise over livestock operations, they must report releases of harmful gases under CERCLA and EPCRA.

The more onerous cleanup requirements of CERCLA also provide a means to hold integrators liable for pollution from confinement livestock operations. The City of Tulsa, Oklahoma, sued Tyson and other vertical integrators in the poultry industry under CERCLA, but did so under Section 107, which requires cleanup of contaminated properties. n132 The City alleged that confinement operations owned directly by vertical integrators and those owned by others who raise poultry under contract with vertical integrators polluted and caused eutrophication of the lakes that supply Tulsa with its municipal water. n133 To determine whether the integrators were "arrangers" as defined by CERCLA, the court adopted the Eleventh Circuit's approach of "focusing on all of the facts in a particular case." It concluded that a party's knowledge of the release, whether a party owns the hazardous substance, and the intent of the parties are all relevant but not determinative of whether an integrator is an arranger. n134 The court denied both the city's and the integrators' motions for summary judgment on the vertical integrators' qualification as arrangers under CERCLA, concluding that it needed more facts to decide whether the integrators wielded sufficient control over the operations to be liable for cleanup under CERCLA. n135 The court wanted to obtain further evidence on who owned the poultry litter, whether the integrators had the authority to control, and whether the integrators participated in the release.

[*822] Assuming the court had access to the contracts between the growers and the integrators, and assuming the contracts included the almost ubiquitous provision that the grower is solely responsible for animal waste resulting from the operation, it is significant that the court did not find the contractual language determinative and rule for the defendants on the summary judgment motion. Unless the court believed public policy reasons outweighed the express provisions of the contract, it would have ruled in favor of the integrators at this stage.

The court also denied the integrators' motion for summary judgment on the applicability of CERCLA's exception for the "normal application of fertilizer." n136 Courts have construed "release" broadly and the exceptions to CERCLA liability narrowly. n137 Refusing to accept the integrators' argument that spreading animal waste on cropland was a per se "normal application of fertilizer," the court pointed to the legislative history of the Act. A Senate Report defining the terms used in the statute clarifies what the exclusion does not cover: "any dumping, spilling, or emitting, whether accidental or intentional, in any other place or of significantly greater concentrations or amounts than are beneficial to crops." n138 This language is relatively straightforward, but because CERCLA does not itself provide a definition for "normal application of fertilizer," and because no court has suggested a definition, the court determined that it could not adopt either the city's definition (an amount of poultry litter that provides no more than the optimum level of phosphorus in the soil) or the integrators' definition (an amount that is usual in the industry). n139 The court found insufficient evidence to issue a final decision. n140

In line with Sierra Club, Inc. v. Tyson Food, Inc., if integrators are liable under the CERCLA reporting scheme, they should also be liable under CERCLA's provisions governing the cleanup of hazardous substances. n141 Bestfoods provides the general rule on this point. n142 There, the Supreme Court determined that parent companies are not automatically responsible for the cleanup of pollutants released by their subsidiaries because it is not the relationship between the parent and the subsidiary that matters but rather the relationship between the parent and the facility. n143 To be held liable for the cleanup of hazardous substances under CERCLA, "an operator must manage, direct, or conduct operations specifically related to pollution, that is, operations having to do with the leakage or disposal of [*823] hazardous waste, or decisions about compliance with environmental regulations." n144

Using the implicit reasoning of Bestfoods, integrators should be required to clean up contaminated property because of their ability to control the operations of their growers, regardless of the structure of the business relationship. Integrators control the environmental aspects of their growers' operations in several ways. First, they require that growers meet building specifications, which include ventilation systems to remove chemical waste such as ammonia from the buildings, as well as manure management systems that are necessary to move animal waste from confinement buildings. n145 Second, they determine the inputs of the livestock operation, including the breed and number of

animals, the feed, and the medication, including administration of the subtherapeutic levels of antibiotics necessary to prevent the spread of disease in the densely populated confinement buildings. Studies show that the breed of animal and the food provided directly influence the amount of waste products such as phosphorus the animals will produce and thus the amount of the pollutant that ultimately will be released into the environment. n146 For example, feeds have been developed to be lower in protein or phytate, which increases the ability of livestock to efficiently process nutrients such as phosphorus and nitrogen rather than excreting them. n147 Finally, integrators inspect the facilities, usually on a weekly basis, and either make management decisions directly or supervise the decision making of growers. n148 Because of this control over livestock facilities, integrators should be held responsible for the release of hazardous substances under the CERCLA cleanup provisions of Section 107. n149

Integrators have potential CERCLA liability under several theories: (1) as parties in charge, who fail to report releases from the livestock facilities; (2) as arrangers, who directly control the disposal of the waste of their animals; and (3) as operators, who control the environmental [*824] decision making for growers' livestock facilities. This liability is consistent with both CERCLA's purpose and the case law interpreting the Act.

D. Integrator Liability Under the CWA

Enacted in 1972, the goal of the Clean Water Act (CWA) was to restore the "chemical, physical, and biological integrity of the Nation's waters." n150 The CWA, which gives states primary responsibility for regulating water pollution, classifies sources as either nonpoint or point sources; the latter require permitting under the National Pollutant Discharge Elimination System (NPDES). n151 Most livestock farms are nonpoint sources, but CAFOs are specifically defined as point sources. n152 In the past, many CAFO operators apparently believed that most animal feeding operations that met numeric thresholds did not require permits. n153 In fact, by 2001, only 20% of CAFOs requiring NPDES permits had obtained them. n154 However, under rules promulgated by the EPA in 2003, (1) essentially all operations meeting the numeric threshold for CAFOs will be required to obtain permits and (2) NPDES permits cover discharges on any land under the control of the CAFO. n155 The permits include nonnumeric effluent limitations - that is, instead of limiting the quantity of waste that a CAFO is permitted to discharge, the permits require CAFOs to develop and implement nutrient management plans (NMPs) that "minimize phosphorus [*825] and nitrogen transport from the field to surface waters" and to follow other best management practices, as determined by the state implementing the NPDES permitting system. n156 All CAFOs are expected to obtain permits by April 13, 2006, although most states are authorized to issue general permits covering essentially all CAFOs in the state. n157

As the case law and the EPA's new rules on CAFOs indicate, confinement livestock operations and vertical integrators must comply with the CWA. Specifically, the agricultural stormwater exemption does not apply when CAFOs overapply livestock waste to land, and vertical integrators may be liable for this overapplication in some circumstances. In addition, federal and state environmental agencies have the authority to require integrators to obtain NPDES permits along with their growers. n158

1. The Agricultural Stormwater Exemption and Overapplication of Waste

The CWA exempts from point source status - and thus from regulation - agricultural stormwater, which is defined as "return flows from irrigated agriculture." n159 Neither the CWA nor the EPA's pre-2003 regulations clarify what kinds of discharges this exemption includes. n160 Consequently, it has been up to the courts to determine the boundaries of the exemption. The Court of Appeals for the Second Circuit began this process in Concerned Area Residents for the Environment v. Southview Farm. n161 In the court below, the jury had found that runoff caused at least in part by oversaturating a field with manure made the stormwater exemption inapplicable. Rather than finding that all runoff from agricultural operations was exempt from regulation under the CWA, the Second Circuit found the jury verdict reasonable and put the discharge squarely into the point source category. n162 The court construed the exemption narrowly, quoting a Senate Report as evidence that the stormwater exemption applies only to return flows from the irrigation of cropland:

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In exempting discharges composed "entirely" of return flows from irrigated agriculture from the requirements of section 402, the committee did not intend to differentiate among return flows based upon their content. The word "entirely" was intended to limit the exception to only those flows which do not contain additional discharges from activities unrelated to crop production. n163

Because the operation in Southview Farm qualified as a CAFO under the CWA regulations, the court classified the entire facility as a point source, and the stormwater exemption did not apply.

In Water Keeper Alliance, Inc. v. Smithfield Foods, Inc., the Water Keeper Alliance's CWA and RCRA claims against Smithfield survived a summary judgment motion. n164 In deciding on the motion, the district court suggested both that the defendant's sprayfields n165 would qualify as point sources and that runoff from animal waste applied to fields does not automatically fall within the CWA's agricultural stormwater exemption. n166 Once an operation qualifies as a CAFO, the entire operation, including areas of disposal such as sprayfields, is subject to the CWA. n167 As the court said, "excluding parts of the waste management system from the definition of a CAFO by limiting the CAFO area to the land underneath the feeding areas would compromise the goals of the CWA by allowing widespread pollution by industrial feedlots pumping waste into other areas of their farms." n168 Thus the sprayfields are themselves point sources, n169 and point sources cannot fall within the stormwater exemption. n170

The EPA's new regulations are consistent with the case law. Unless the CAFO applies livestock waste in accordance with its NMP, discharges will be in violation of its NPDES permit. Both environmental and industry groups challenged the 2003 CAFO regulations. The Second Circuit Court of Appeals held that by not requiring NMPs to be included in the permit application or to be reviewed by the permitting authority, the CAFO rules [*827] do not adequately prevent CAFOs from adopting NMPs that allow inappropriate rates of discharge. Exclusion of the NMPs from the permit also violates the CWA's public participation requirements. n171 However, the court also held that the EPA had "exceeded its statutory jurisdiction by requiring all CAFOs to either apply for NPDES permits or otherwise demonstrate that they have no potential to discharge." n172 Consequently, regardless of the size of the operation, the EPA, rather than the CAFO owner, will have to show that an operation has the potential to discharge pollutants. n173

As these cases and the new regulations demonstrate, the CWA's exemption for runoff from the irrigation of cropland does not apply where livestock producers use land essentially as a dumping ground for the waste produced by their animals. Animal waste can be applied at a rate that will be beneficial to growing crops. But when it is applied heavily, it first damages any vegetation on the land and then flows into the groundwater when the vegetation and the land itself can absorb no more of the pollutant. It remains to be determined whether the EPA and state permitting authorities have the resources to meet their burden of showing that a CAFO has the potential to discharge.

2. Copermitting Integrators Under the CWA

Although CAFOs were still relatively rare (and much smaller) in most areas of livestock production when Congress passed the CWA, concerns about their potential to pollute the environment prompted Congress to list CAFOs as point sources rather than as nonpoint sources and thus attempted to ensure that CAFOs would be regulated more stringently than traditional farms. n174 Copermitting - requiring both the grower and the integrator to obtain a permit to engage in large-scale confinement livestock production - is extremely controversial, as the following discussion of failed federal and state attempts to implement such a system makes clear. Requiring integrators to obtain permits would, however, ensure that the public not bear the pollution burden if individual growers lack the capital to pay fines associated with the release of hazardous substances into surface waters. In this way, copermitting would serve to advance the goals of the CWA.

a. EPA's Attempt to Require Copermitting of Integrators

President Clinton announced his Clean Water Action Plan in 1998 in response to a study that revealed polluted runoff to be the most significant [*828] contributor to water quality problems and found CAFOs to be part of that problem. n175 On January 12, 2001, the EPA proposed rules for the operation of CAFOs n176 and, after addressing public comments on them, issued final rules on December 15, 2002. n177 The proposed rules included the following provision that would require integrators to be jointly permitted with their growers as operators of CAFOs by defining an operator, n178 among other things, as

(ii) A person who the Director determines to be an operator on the basis that the person exercises substantial operational control of a CAFO. Whether a person exercises substantial operational control depends on factors that include, but are not limited to, whether the person:

(A) Directs the activity of persons working at the CAFO either through a contract or direct supervision of, or on-site participation in, activities at the facility;

(B) Owns the animals; or

(C) Specifies how the animals are grown, fed, or medicated. n179

This provision clearly would have affected vertical integrators involved in both pork and poultry production because almost all production contracts provide that the integrator retains ownership over the animals throughout the growing cycle; include specifications for building design, feed, and medication; and permit integrator employees unlimited access to the grower's property for inspections and to complete the work necessary to finish a growing cycle in case of a grower's breach of the contract. n180

In the proposed CAFO regulations, the EPA emphasized that it, and the states implementing the CWA, had authority to require copermitting of integrators and included a discussion of the issue in the proposed [*829] regulations only to clarify when - not if - copermitting would be required. n181 This authority stems from the EPA's interpretation of the term "operator" in the CWA to encompass integrators, thus requiring that integrators obtain permits to discharge. n182 Courts have interpreted the term to make liable under CWA those who (1) "perform[] the work" or (2) have "responsibility for or control over the work." n183 According to the EPA,

Under the existing regulation and existing case law, integrators which are responsible for or control the performance of the work at individual CAFOs may be subject to the CWA as an operator of the CAFO. With today's proposal, EPA is identifying some factors which the Agency believes indicate that the integrator has sufficient operational control over the CAFO to be considered an "operator" for purposes of the CWA. n184

In addition, the EPA suggested that ownership of the animals creating the waste would be a sufficient, but perhaps unnecessary, "ownership interest" to establish liability under CWA. n185 It analogized integrators to municipalities that contract with service providers to handle wastewater treatment; where municipalities exercise control over the treatment, they are required to obtain NPDES permits. n186 Therefore, where integrators exercise control over a confinement livestock production facility, they should be required to obtain NPDES permits.

Although the EPA's rationale seems persuasive, the status of copermitting of integrators remains in question because the EPA did not include copermitting in its final CAFO rules. Consequently, it is unclear whether copermitting has always been required in some circumstances, as the proposed rule suggested, or whether the EPA, by failing to expressly require copermitting, has abandoned such a scheme for ensuring integrator responsibility under the CWA. Political pressures likely forced the EPA to step back from its initially strong position that the CWA already requires

copermitting of growers and integrators. Therefore, it will be up to the courts to determine whether the underlying statute and regulations provide a basis for requiring integrators to obtain NPDES permits. Because integrators fit the statute's definition of "operator," courts should find that integrators require operating permits.

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b. States' Attempts to Require Copermitting of Integrators

No state currently requires copermitting, but several states have attempted to require vertical integrators to obtain NPDES permits. Maryland was the first state to seriously consider copermitting large chicken processors that were contracting with growers for their supplies. n187 Its regulation would have required companies to "list ... their contract growers, specify the amounts of manure generated and indicate how [it] will be used, ... ensure that their growers keep [adequate] records, ... and submit to regular inspections." n188 However, strong opposition by integrators in the state and a change in the governorship apparently reined in attempts by the Maryland Department of the Environment to require copermitting, and an Administrative Law Judge found the permitting system beyond the jurisdiction of the Department of the Environment. n189

The Kentucky General Assembly also considered a copermitting requirement but decided against it because of heavy opposition by the Kentucky Agriculture Department and the Farm Bureau. n190 In response, the Kentucky Environmental and Public Protection Cabinet issued emergency regulations requiring integrators to obtain NPDES permits, but a state Administrative Regulation Review Subcommittee subsequently found the regulations "deficient." n191 Unsuccessful attempts to require copermitting also have been made in Georgia and Louisiana. n192 The most common argument against copermitting is that states do not have the authority to require it under the CWA, but the EPA undermined this argument when it stated unequivocally in its proposed CAFO regulations that the language of the CWA, without amendment, already allows for copermitting. n193

The CWA is a promising avenue for ensuring that integrators take account financially of the environmental pollution that results from large-scale confinement livestock production. Integrators' control over the amount of pollution produced and released makes copermitting a logical extension - or fulfillment - of the CWA's mandate to protect the nation's waters. Both copermitting and the placement of runoff from CAFOs outside the agricultural exemption fit the legislative intent of the CWA.

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E. Integrator Liability Under RCRA

Unlike CERCLA, which is a backward-looking statutory scheme designed to hold polluters and those who own polluted land responsible for cleanup of contaminated sites, the Resource Conservation and Recovery Act (RCRA) was enacted as a means to track hazardous wastes, from their generation to their final disposal. RCRA regulates generators and transporters of hazardous wastes and waste disposal sites. It defines hazardous wastes as discarded material (i.e., material that will not be recycled for another use) in sufficient quantity or concentration and with physical, chemical, or infectious qualities with the potential to "cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness" or to "pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed." n194 Liability for pollution from animal waste under RCRA is not a well-developed area of law, in large part because the statute specifically exempts from coverage operations with NPDES permits, and most CAFOs must obtain such permits. n195 The other limit on the application of RCRA to livestock waste is that RCRA covers only substances that are disposed of, and livestock waste used as a fertilizer is not technically discarded.

Only two cases have addressed the possibility of RCRA liability for livestock waste discharge. In the first, Concerned Area Residents for the Environment v. Southview Farm, the court, in ruling on a CWA claim, stated that

animal waste fits RCRA's definition of solid waste. n196 In a more recent case, Water Keeper Alliance, Inc. v. Smithfield Foods, Inc., a RCRA claim against Smithfield survived a summary judgment motion. n197 The court found that although Congress did not intend RCRA to reach livestock waste that is used as fertilizer to benefit the land, livestock waste spread on land "in such large quantities that its usefulness as organic fertilizer is eliminated" probably is not exempt from RCRA. n198 It also found, in line with Southview Farm, that no blanket exemption excludes animal waste from RCRA's definition of "solid waste." n199

Application of animal waste should not automatically fall within the "normal application of fertilizer" exception to RCRA. Four subissues are important here. First, because livestock production has become very specialized, large CAFOs rarely have cropland or land used for forage. The [*832] fields on which the animal waste is sprayed often are seeded with Bermudagrass, which acts not as a crop n200 but as a waste-disposal system for the manure. n201 Second, even if confinement livestock producers do use the waste on cropland, no exception should apply when they use amounts over those beneficial to crops. n202 Third, RCRA's legislative history suggests that Congress did not intend to exclude overapplication of animal waste. It included the qualification "when returned to the soil as fertilizer or soil conditioner" every time it mentioned the fertilizer exemption, and it was aware when it passed RCRA that about twelve times more solid waste is produced by livestock than by manufacturing. n203 Finally, to avoid qualifying as a waste under RCRA, a substance must be recycled immediately for use in the same industry in which the waste was generated. n204 Unless the "crop" being "fertilized" by the waste is used as feed for the livestock or in some other way as part of the industry, the waste has been discarded and RCRA guidelines apply.

Assuming RCRA does apply to overapplication of animal waste, however, the question remains whether integrators could be held jointly liable under the Act. One reason for holding them responsible is that integrators have a great deal of information about their producers and control over the process. Because they invariably know how many acres a grower has on which to dispose of the waste, integrators are responsible along with growers for contributing to overapplication and thus violating RCRA. Overapplication of waste from confinement operations likely will become a more serious problem if current trends continue. CAFOs generally have very few acres available on which to spread livestock waste, and it will be difficult for them to qualify the disposal of waste as fertilizer. Although no court has yet found vertical integrators liable under RCRA, such a finding would be supported by both the statutory language and the public policy behind the law if the facts of a case are consistent with integrators' usual practices.

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F. Integrator Liability Under the CAA

The Clean Air Act (CAA) regulates air pollutants under an ambitious and complex statutory and regulatory scheme in which the EPA sets national ambient air quality standards for harmful air pollutants and states devise implementation plans to meet these standards. n205 In the past, farms escaped regulation under the CAA because of de minimus emissions exemptions. n206 However, because of the expanding scale of livestock production, regulation of emissions from the largest CAFOs requires reconsideration. Confinement buildings and waste-storage lagoons emit ammonia, hydrogen sulfide, volatile organic compounds, and particulate matter, n207 and they should be subject to the same CAA regulations as manufacturing facilities. Studies of the harmful effects of CAFOs on air quality evidence the necessity of regulating air emissions from these industrial sources. n208

That large CAFOs emit air pollutants at levels that trigger enforcement under the CAA is further evidenced by a consent decree between the EPA/DOJ and Premium Standard Farms/Continental Grain Company on April 29, 2002, requiring the latter to monitor and report on emissions from its buildings and lagoons and to apply for any CAA permits required by the state of Missouri. n209 Nevertheless, a recent EPA proposal will give confinement livestock operations amnesty for violations of the CAA and the reporting requirements of CERCLA and EPCRA in exchange for data on air emissions from the largest CAFOs, despite clear language in the statute authorizing the EPA to require sources to monitor and report on their emissions. n210 On January 21, 2005, the EPA announced its Air Quality Compliance Agreement. The agreement would provide all confinement operations that apply to participate in an

emissions-monitoring program immunity from air quality violations and reporting requirements for the two-year study period and for all past violations. Only twenty-eight sites will be monitored, but the proposal will provide amnesty for all four [*834] thousand owners of CAFOs who are expected to apply for the program. Participants in the study will pay a small fee and a penalty for "presumed" past violations. n211 Given CAA penalties of up to $ 32,500 per violation per day, large livestock confinement operations have great incentive to apply. In addition to immunizing operations from EPA enforcement, the consent decree might also prevent citizen suits, in violation of the CAA's express provision for such suits. n212

The agreement specifically extends the offer of immunity to vertical integrators and even exempts them from program fees if their contract growers have also signed such an agreement with the EPA. n213 Given that the agreement is extremely industry friendly, it is significant that all parties now seem to acknowledge that integrators bear some responsibility for waste produced on operations with which they contract.

Relatively few CAA claims have been brought against confinement operators themselves n214 and none have been brought against vertical integrators. Nonetheless, integrators are probably liable under the CAA. Emissions of ammonia and other air pollutants depend on several variables controlled by integrators, including building design and storage, treatment methods for animal waste, and dietary inputs. n215 Also, CAA violations are similar to violations of CERCLA and EPCRA reporting requirements, under which at least one court has found integrators jointly liable. n216

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IV
Integrator Liability Within the Broader Legal System

Whether vertical integrators ultimately are held responsible for pollution originating from confinement livestock production operations remains to be seen. n217 However, as regulation of more obvious sources of pollution has significantly improved the environment, pressure to deal with previously under-or unregulated sources of pollution has increased. n218 Confinement livestock production is one of the most visible and arguably least regulated sources of air and water pollution. Because the law is developing in response to the profound changes in the organizational design of agriculture, it is unclear to what extent and on what legal bases vertical integrators will be held liable for waste produced by operations that are, for all practical purposes, under their control. Integrator liability can fit within our current legal structure, as the following discussion of contract and franchise law principles reveals.

A. Integrator Liability Comports with Principles of Contract Law

To be intellectually and legally sound, integrator liability must comport with general principles of contract law. On its face, it seems to conflict directly with freedom-of-contract principles because growers choose to assume all liability for environmental pollution in their contracts with integrators. However, on further investigation, integrator liability does not undermine contract principles because contract law recognizes that enforcement is inadvisable when powerful parties wrangle unfair promises from substantially weaker parties.

Livestock production contracts are essentially form contracts, with little variation of material terms across the industry. n219 Growers may negotiate price, but integrators dictate virtually all other terms. n220 They are able to do so in part because they have greater access to information and greater bargaining power, because there are many more growers than integrators, n221 and because there is little opportunity for growers to sell on the open market or to gain access to information. n222 Almost all production contracts assign the waste, its disposal, and liability for improper disposal to [*836] the grower. n223 Consequently, making integrators liable for the waste of livestock produced under these contracts would directly contradict the terms of the contracts currently in use.

The broad and consistent enforcement of contracts is thought to increase citizens' individual economic freedom specifically n224 and the freedom of society more generally. n225 However, in a free society, freedom of contract is

sometimes limited for public policy reasons, most often when the contract will result in harm to a third party or, more controversially, to one of the parties to the contract. n226

Two separate groups stand to lose from enforcement of contract provisions that reserve manure management responsibility to growers and that indemnify integrators for any environmental law enforcement action related to production contracts. The farmers themselves stand to lose both their businesses and their homes, as they generally finance the construction and maintenance costs associated with confinement buildings by mortgaging the farm, which includes the family homestead. n227 Although we might as a society wish to avoid the personal, family, and community instability that results when small farmers go out of business, n228 it is hard to counter arguments that this kind of paternalism devalues the decision-making power of the growers. n229 After all, farmers are at base businesspeople. n230 As [*837] the imbalances of power and information between growers and integrators increase (in part because independent livestock production has been all but lost as an option), however, we may need to reevaluate our approach to farmers, particularly those involved in the kinds of production contracts discussed here. n231 Because farmers are not the only vulnerable parties in the confinement livestock production scenario, we need not dwell on this dilemma.

The public stands to lose as well, in terms of both environmental quality of life and the financial burden it will bear if integrators are unreachable in the legal system. n232 If problems arise in assigning liability as between the grower and the integrator, the difficulty disappears when considering whether the public or the integrator should bear the burden of pollution from confinement livestock operations. If a grower does not install the technology necessary to prevent pollution from a confinement operation or attempts to raise more animals than the land can support, the local community will have to deal with the effects of pollution or remediate the site at its own expense if the grower is unable to pay for the cleanup. n233 Freedom of contract should trump only when the potential loss of freedom outweighs fairness concerns; in the case of livestock production contracts, it does not.

Ultimately, consideration of whether to uphold a contract involves determining whether "the reduction of individual freedom caused by the regulation or decision [is] outweighed by either the need to protect the health and welfare of members of society or by such considerations as [*838] equality, fairness, or community." n234 In this case, concerns regarding fair treatment of growers, community stability, and citizens' health and welfare strongly indicate that integrator liability is consistent with principles of contract law.

B. Integrator Liability Comports with Principles of Franchise Law

Integrator liability also makes sense when one considers franchise law. A franchise agreement gives the franchisee the right to offer, sell, or distribute goods through a marketing approach dictated to varying degree by the franchisor in return for the payment of a fee. n235 Integrator liability does not rest on the same principles as does franchisor liability. Nonetheless, similarities between the parties involved in integrator and franchise agreements suggest that the same public policies that guide franchise-agreement interpretation and enforcement could be useful in the integrator context. Both franchise and integrator relationships allow smaller entities to access economies of scale while maintaining some sense of independence. n236 Like livestock growers, franchisees are often small businesspeople who lack the capital to start businesses themselves but who may be able to access capital on the basis of expected revenues from a contract.

Despite some underlying similarities between franchise and integrator relationships, disclosure aspects of franchise agreements are regulated by [*839] the Federal Trade Commission, n237 but integrator contracts are not specifically regulated at the federal level. n238 Virtually all states have enacted laws to govern franchise relationships to some degree, n239 but few states have enacted laws specific to the integrator relationship. n240 This lack of attention is unfortunate because neither contract growers nor franchisees fit the traditional categories of agent and independent contractor. The result is an uncertain legal framework that ultimately reduces the likelihood that either the integrator or the grower will adequately protect the environment.

Perhaps the primary rationale for vicarious liability of the integrator or franchisor is that in some situations compensation of a victim trumps liability on the basis of blame. n241 For example, where a franchisor is a heavily

capitalized company that uses undercapitalized "independent contractors" rather than employees, while maintaining substantial control over the operations, one may presume that the franchisor is attempting to keep the benefits of an employment relationship while avoiding the risks. This idea is consistent with the integrator context, particularly with regard to poultry production and perhaps somewhat less so with regard to pork production. n242 Reasons for shifting liability upward fit both the franchise and the integrator context. First, reaching both integrators and franchisors increases the amount available to victims. Second, the public benefits from giving franchisors and integrators an incentive to carefully and adequately supervise the parties under their control. Third, both integrators and franchisors profit from the relationship, and it is equitable to tie liability to that profit. n243

Franchises are more familiar than grower-integrator relationships, so franchise law as developed through statutes and case law, though unsettled, is instructive in considering how to incorporate integrator liability into the legal system. Franchisors control both the result of performance and to varying degrees the means of performance. n244 However, franchisors' lack of total control over the means of performance makes application of vicarious liability principles problematic. n245 To circumvent this problem with franchises, courts have used day-to-day operational control by the franchisor as a proxy for total control over the means of performance. n246 The [*840] courts are split on whether franchisors need only have the potential to control or whether they must have actual control to incur liability. n247 The apparent-actual control distinction is likely irrelevant in the typical integrator relationship, however; integrators control the building specifications, the breed and number of livestock delivered, and day-to-day operations such as building ventilation rates. Therefore, if integrator liability follows the rationale of franchise law, integrators would be liable for the pollution produced by their growers. Unfortunately, courts have not yet determined how to approach the integrator relationship. Ultimately, the unsettled nature of the law leads both integrators and growers to take insufficient steps to avoid polluting the environment. n248 Instead, the public bears the burden of dealing with the resulting pollution.

The franchisor liability framework suggests that making integrators responsible for the pollution of their growers is consistent with existing law. A more cohesive and consistent body of law to govern both types of relationships would provide the means to protect franchisees and growers who lack bargaining power from sharp practices and to ensure that all parties adequately protect against pollution harms to the public.

V
The Implications of Integrator Liability for Environmentalists and Small Farmers

Assuming that integrator liability is solidly grounded in existing legal principles, the question becomes how this liability is likely to affect the two interest groups that have advocated for it: environmentalists and coalitions of small farmers. Environmentalists have much to gain and virtually nothing to lose from a legal scheme that makes vertical integrators liable for the release of pollution from livestock operations. The benefits of integrator liability to small farmers are less certain and do not resolve some of the other major problems that threaten independent farmers' continued existence, such as the consolidation of buyers of agricultural products, artificially deflated prices for their goods, and subsidization of agricultural products controlled by big agribusinesses. Environmentalists and small farmers have different things to gain from integrator liability. In the short term, the benefits will be more apparent for environmentalists than for small farmers. Nonetheless, the efforts and alliance of the two interest groups will be more likely to yield at least some positive results for both than would their individual and uncoordinated efforts, and coalitions formed to address integrator liability may well find future shared interests.

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A. The Environmental Benefits of Integrator Liability

There is little doubt that the environment would benefit from expansion of integrator liability for large confinement livestock operations. First, because integrators almost always control the input to the animals (including food, supplements, and medication), making them liable for the output (pollution) would create an incentive for them to use the least-polluting inputs possible. n249 Because integrators are already in a supervisory position relative to growers -

as the weekly inspections that are a relatively common element of production contracts show - it makes sense to extend liability to them to reduce environmental harm.

Second, integrators are in a position to shift the pollution costs of livestock production to the consumer. If the large confinement model does not prove economically profitable once integrators must incorporate all costs of production, integrators will have to choose another method of production or shift to other areas of business. n250 Because farmers generally must accept the abnormally low prices that integrators have the power to establish, they lack a shifting mechanism and cannot pass the true costs of production on to the ultimate consumer. n251 Requiring only growers to shoulder compliance and cleanup costs increases the probability of unmitigated pollution because they are unlikely to have the capital to either clean up their property (and the surrounding environment) or to pay fines levied by regulators. Consequently, integrators must determine whether large-scale confinement livestock production remains viable after properly internalizing all their costs and after considering the prices they can charge. n252

Third, corporate integrators often have greater financial resources to devote to research and development, and extending liability to them would encourage the industry to look for technological or operational innovations to deal with pollution. n253 Because they have many growers raising animals for them, integrators' investments in research and development could be spent more efficiently than could the funds of individual growers. n254 For [*842] example, they could find ways to eliminate or decrease odor problems and other air pollutants or they could build waste treatment facilities that process the wastes produced in an entire area. Because integrators often contract with many growers in a single geographic area they are in a good position to efficiently provide "centralized treatment, storage, and distribution facilities." n255 Also, as compared with individual farmers, large multinational corporations are in a better position to absorb the costs of environmental law compliance. n256

Finally, integrator liability may increase oversight of growers' environmental compliance by integrators, n257 essentially providing both a market and a regulatory mechanism to ensure compliance. However, because producers, who engage in the day-to-day work necessary to produce livestock, are already liable, making integrators jointly liable will not decrease accidental discharges but only pollution that results because of design flaws or processor demands for production levels beyond what the grower's land can support. n258 Integrators are in the best position to oversee and manage the polluting effects of livestock production, and it is most efficient - and likely to be the most effective way to deal with pollution from large confinement operations - to make them liable for the waste of the animals they own.

B. The Effects of Integrator Liability on Small Farmers

The outlook is a bit less optimistic for small farmers, especially in the short term, but their chances of maintaining their way of life are generally better with integrator liability than without it. Small farmers are neither homogeneous ideologically nor easily organized, and it has become increasingly difficult to generalize about them because of the split between contract and independent farming. n259 Indeed, it appears that independent farmers have much more to gain from vertical integrator liability than do contract growers because the increased costs of production resulting from [*843] integrator liability will put small farmers on a more even playing field relative to large confinement operations.

Contract growers are in a more precarious position with regard to integrator liability and fear more immediate losses. If integrators become subject to environmental regulation despite efforts to contract out of such liability, they may choose to do away with the contract system entirely and raise the animals on sites they own and operate. But integrators would not necessarily eliminate contract farming even if they were liable for the pollution that results. Livestock production entails many, many financial risks, of which pollution is only one. Integrator liability would likely promote the interests of independent farmers, without necessarily harming contract farmers. If independent livestock production were a viable option, at least some contract growers might return to sustainable practices. n260

Critics, including some farmers, argue that strengthening integrator liability will increase integrators' leverage in negotiations with producers, make indemnity provisions more common in production contracts, decrease producers' already limited independence in operational management, create an incentive for integrators to terminate contracts early

when it is financially beneficial to do so, make it more difficult for producers to switch from contracting with one integrator to another, and overall decrease producers' profits. n261 These arguments, however, relate more to power structures within the industry than to reservations about the potential utility of integrator liability in protecting the environment. A similar argument is that integrators are more likely to pass the compliance costs on to producers than to invest in the technology necessary to decrease pollution from CAFOs or to pass the costs on to consumers. n262 Integrators involved in meat processing may also choose to procure their meat supplies from overseas providers subject to environmental laws less stringent than those in the United States. n263 If integrators are held jointly responsible for pollution from CAFOs, they may have less interest in contracting with growers at all and instead simply raise livestock themselves; land ownership may then become increasingly concentrated in corporations. n264 Some growers [*844] worry that extending liability to integrators will only make their uncertain situations even more precarious. n265 Although these arguments are not without merit, integrators already exercise profound control over the operations: contracts are kept relatively short, growers must keep their heavily mortgaged, expensive facilities in use or face immediate and drastic losses, and the small number of buyers - all of whom demand similar contract terms - leaves few options for growers. For environmentalists to effectively transform livestock production to a more environmentally friendly model, they must garner the support of sufficient numbers of farmers who can stem the current trend toward industrialization.

3. Strange Bedfellows? Finding Common Ground Among Environmentalists and Small Farmers

The interests of environmentalists and farmers do not always coincide. Environmentalists have been justly critical of the imprint agricultural activity has made on the environment. Farmers in turn have been suspicious of environmentalists' agenda to regulate land use. Even if the groups can look beyond their past ideological differences, however, they face other difficulties, including cultural differences. Environmentalists often live in urban areas, whereas farmers are inherently rural. Any dialogue between the groups thus requires some degree of translation, as, at a basic level, "rural land is differentially "habitat' for environmentalists [and] "home"' for farmers. n266 Farmers and environmentalists can fashion a shared discourse that represents a compromise between the extreme factions of both groups, but it will take more than a little effort on both sides.

Environmentalists have much more to gain in the short term from integrator liability than do small farmers, particularly those who produce under contract. If environmentalists wish to encourage sustainable agricultural practices, they must acknowledge the realities of agriculture and focus on the common goal. The tendency to idealize independent farmers and to vilify farmers who choose to enter into contracts with integrators oversimplifies a complicated issue. The interests of independent and contract farmers are not so different. Many growers migrated to either independent confinement production or production contracts in an attempt to hold on to their land when the costs of raising livestock began to exceed [*845] their returns. n267 Their reasons for holding on to the land may be purely profit driven, given the value of land as an investment, but those who live on the land often have a deep connection to it and try to take care of it as best they can. n268 The desire to keep land must encompass a deeper desire to keep the land clean and fertile; no benefit flows to the owner when land and its water are finally destroyed. It is this desire to preserve the land for future generations that has brought and will continue to bring small farmers - of all stripes - and environmentalists together.

Conclusion

Supporters of agribusiness frequently argue that small farmers do not have the capital to protect the land. n269 But protecting the land may not be as expensive, in the long run, as exploiting it. Although gross returns from traditional methods of livestock production may be lower than those from confinement operations, the expenses are also much lower, thus leaving landowners with more long-term options about how best to use the land, including, perhaps, participating in federal conservation programs or turning to alternative agricultural practices such as community-supported agriculture or organic farming.

We do not yet have the information to evaluate whether corporations or individuals are better stewards of the land. The prudent choice would be to ensure the continued viability of traditional livestock production methods until we have

had a chance to adequately study the issue so that we do not learn too late which system best protects both the environment and rural communities. Environmentalists have a role to play in this regard, and to effectively play that role they must make an effort to see beyond the environmental issues associated with agriculture to the social and familial values that define the small farmers who will be open to sustainable livestock production. Likewise, small farmers must acknowledge that they often could be better stewards of their land.

The most important immediate result integrator liability can bring about is to control the currently unchecked expansion of confinement livestock operations. Vertical integration has played a key role in increasing the scale of these operations to the point that naturally processing the vast amounts of waste produced is virtually impossible. Holding integrators responsible for the concentration of waste on small land areas and in fragile geographic regions makes sense because they have profited the most from the operations. If it is too late to turn back to a more sustainable model for [*846] livestock production, at least we can begin to hold responsible those who have done much to replace once thriving red barn farms with low-lying industrial sheds throughout the countryside.

The vertical integration of livestock production has had a profound effect on rural areas throughout the country. The influx of capital from large agribusinesses has advanced the trend toward confinement livestock production and pushed small independent farms toward contractual relationships or out of business altogether. It has also created enormous environmental problems because of a general lack of attention to the consequences of bringing together vast numbers of animals, often on small plots of land, seemingly without a plan to deal with the resulting animal waste. These environmental problems affect not only local rural areas surrounding CAFOs but also urban areas as the water and air quality problems caused by CAFOs spread throughout the ecosystem.

Environmental groups and groups of rural residents have made efforts to ensure vertical integrators are held liable. A desire to force vertical integrators to account for the true costs of livestock production has brought together these unlikely allies, who must work together to produce the outcome each desires: a system of sustainable farming that minimizes environmental degradation.

Disagreements about the structure of livestock production and its potential to degrade the environment likely will continue to polarize rural areas throughout the United States. Because of the rapid and extensive exit of small, independent farmers in the past decade and the decline in marketing opportunities, this may be the final farm crisis, at least as it relates to independent family farming. n270 Whether the relatively tenuous alliance between family farmers and environmentalists can withstand the fallout of an intensified battle between agribusiness and environmentalism remains to be seen. But the battle has begun in earnest, and the food we eat, the air we breathe, and the water we drink depend on ensuring that industrial agriculture bears the costs it is now shifting to others.

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Legal Topics:

For related research and practice materials, see the following legal topics:
GovernmentsAgriculture & FoodGeneral OverviewReal Property LawEnvironmental RegulationLiabilities & RisksContractual RelationshipsTortsStrict LiabilityHarm Caused by AnimalsGeneral Overview

FOOTNOTES:

n1. Specialization in agriculture - the shift from combined livestock and crop farming to single-product production - in some ways lies at the heart of the many environmental problems associated with agriculture. In an ideal system, combined livestock and crop farming provides a use for animal waste as fertilizer for crops, reducing the need for polluting chemical fertilizers. Laura L. Jackson, Large-Scale Swine Production and Water Quality, in Pigs, Profits, and Rural Communities 103, 115 (Kendall M. Thu & E. Paul Durrenberger eds., 1998)

("From an ecosystem point of view, crops and livestock cannot be separated.").

n2. Consider the California Milk Advisory Board advertisements that feature red barns and dairy cows freely wandering green pastures - "happy cows" - and compare this image to the reality of most dairy operations in California, which confine hundreds or thousands of animals in a single facility.

n3. Agriculture is expressly excluded from some environmental laws. See J.B. Ruhl, Farms, Their Environmental Harms, and Environmental Law, 27 Ecology L.Q. 263 (2000). Farmers also garner special treatment in other areas of law. For example, farmers enjoy a separate bankruptcy code, 11 U.S.C. 1201-1231 (2000), and an antitrust exemption for agricultural cooperatives under the Capper-Volstead Act, 7 U.S.C. 291-292 (2000). Farms escape many labor laws, including the requirement to pay minimum wages, 29 U.S.C. 206, 213(a)(6) (2000), the requirement to pay overtime rates, 29 U.S.C. 213(b)(12), and, in some cases, the requirement to adhere to child labor laws, 29 U.S.C. 213(a)(6)(B). See also Economic Research Service, U.S. Dep't of Agric., Federal Laws and Regulations Affecting Agricultural Employers 3-6 (2000), available at http://www.ers.usda.gov/publications/ah719/ah719b.pdf.

n4. Iowa State University, National Ag Safety Database, Livestock Confinement Dust and Gases (1992), available at http://www.cdc.gov/nasd/docs/d001501-d001600/d001501/d001501.html.

n5. See Ruhl, supra note 3, at 305.

n6. Vertical integration occurs in an industry when firms acquire or merge with other firms at an adjacent stage of production. Doug O'Brien, Developments in Horizontal Consolidation and Vertical Integration, National AgLaw Center Research Article, available at http://www.nationalaglawcenter.org/assets/articles/obrien_antitrust.pdf (last visited Apr. 9, 2005).

n7. Producers generally obtain loans to finance the construction of confinement buildings but not the initial operating costs of facilities.

n8. John M. Crespi, Promotion Checkoffs: Why So Controversial? The Evolution of Generic Advertising Battles (National Institute for Commodity Promotion Research and Evaluation), Sept. 2001, at 3, available at http://commodity.aem.cornell.edu/nicpre/bulletins/rb0104.pdf. See also Murray R. Benedict, Can We Solve the Farm Problem? (2d ed. 1959).

n9. The 2002 Census of Agriculture indicates that, at least in terms of factors such as acreage and annual value of sales, the number of small and large farmers is increasing as the number of moderately sized farmers is decreasing. National Agricultural Statistics Services, U.S. Dep't of Agric., 2002 Census of Agriculture: Preliminary Report (Feb. 2004), available at http://www.nass.usda.gov/census/census02/preliminary/cenpre02.pdf. See also Michael Lind, Are We Still a Middle-Class Nation?, The Atlantic Monthly, Jan./Feb. 2004, at 120, 121 (describing the first American middle class as consisting of yeomen farmers who benefited from "social engineering on a colossal scale" in the form of homesteading provisions).

n10. See Kendall M. Thu & E. Paul Durrenberger, Introduction to Pigs, Profits, and Rural Communities, supra note 1.

On the one hand are visions of self-contained, perpetually sustainable family farmers representing all that is best in the ideals of the yeoman farmer of Jeffersonian America and the rural social and economic prosperity that accompanies widespread, small owner-operated farms. On the other hand are conceptions of highly efficient industrial food production, the prosperity industrialization brings to rural communities, and the cheap food it offers consumers. There are many more than two positions on these issues, and it is the politicization of rhetoric that forces people into a dualistic way of thinking... . Science becomes politicized.

Id.

n11. For example, confinement hog-feeding operations have created major divisions among farmers. Resulting problems are not confined to nuisance-type issues but go deeper, to arguments about how such decisions affect the organizational structure of pork production. The more farmers move from the independent farmer model to the production contractor model, the less political influence and market power independent farmers retain. Douglas H. Constance et al., The Contested Terrain of Swine Production: Deregulation and Reregulation of Corporate Farming Laws in Missouri, in Fighting for the Farm 75, 85 (Jane Adams ed., 2003); see also Kathryn Marie Dudley, The Entrepreneurial Self: Identity and Morality in a Midwestern Farm Community, in Fighting for the Farm, supra, at 175, 183 (describing the "competitive individualism" of farmers).

n12. This expanded scale of production has two triggers: (1) increased access to capital because the contract serves as collateral for loans to construct more or larger confinement buildings, and (2) an operation must be of sufficient size to make it worthwhile for integrators to incur the delivery and other costs necessary for the system to operate. See John M. Morrison, The Poultry Industry: A View of the Swine Industry's Future?, in Pigs, Profits, and Rural Communities, supra note 1, at 145, 148.

n13. Spot markets involve immediate delivery of the product or payment for the product. See Black's Law Dictionary 984 (7th ed. 1999). Livestock auctions are an example. See also Jeffrey S. Royer, Market Structure, Vertical Integration, and Contract Coordination, in The Industrialization of Agriculture: Vertical Coordination in the U.S. Food System 73, 93 (Jeffrey S. Royer & Richard T. Rogers eds., 1998) ("Increased integration can be expected to increase overall pork production and lower consumer prices while decreasing hog production by independent producers and lowering both the price they receive for hogs and their net earnings.").

n14. William D. McBride & Nigel Key, U.S. Dep't Agric., Economic and Structural Relationships in U.S. Hog Production (Feb. 2003), available at http://www.ers.usda.gov/publications/aer818/.

n15. Steve W. Martinez, A Comparison of Vertical Coordination in the U.S. Poultry, Egg, and Pork Industries, Agric. Info. Bull., May 2002, available at http://www.ers.usda.gov/publications/aib747/aib74705.pdf (last visited Mar. 4, 2004).

n16. Id. Similarly, packer ownership of hogs increased from 6.4% of the total number of hogs produced in 1994 to 24% in 2000. Id.

n17. National Agricultural Statistics Service, U.S. Dep't of Agric., Trends in U.S. Agriculture: Broiler Industry, available at http://www.usda.gov/nass/pubs/trends/broiler.htm (last visited Feb. 24, 2003). The USDA's choice of words is revealing: "The broiler industry has evolved from millions of small backyard flocks of dual-purpose (eggs and meat) chickens in the early 1900's to less than 50 highly specialized, vertically-integrated agribusiness firms." Id. These sectors are not entirely analogous, however, because hog producers experienced about fifty years of spot markets between noncommercial, subsistence production and vertical integration. Morrison, supra note 12, at 145-54.

n18. Martinez, supra note 15, at 3. Only about 3% of broilers are not produced under contract today. Id.

n19. For example, factors such as drought, consolidation of the retail sector, and increased development on traditionally agricultural land are either entirely or largely beyond the control of agricultural producers. Three grocery conglomerates dominate the current retail food market. See Bruce Bjornson & Michael E. Sykuta, Growth by Acquisition and the Performance of Large Food Retailers, 18 Agribusiness 263 (2002). Also, demand for rural land for nonagricultural development purposes has increased dramatically as the U.S. population has increased and as low market prices for agricultural products have forced the sale of agricultural land for the higher prices developers can pay relative to farmers. See Nicolai V. Kuminoff et al., Farmland Conversion: Perceptions and Realities, 16 AIC Issues Brief 1 (May 2001), available at

http://aic.ucdavis.edu/pub/briefs/brief16.pdf.

n20. See Pickett v. Tyson Fresh Meats, Inc., 315 F. Supp. 2d 1172 (M.D. Ala. 2004). This situation can be compared roughly to the relative power of Wal-Mart in setting prices as a buyer. Because Wal-Mart buys such a large quantity of, say, toothpaste, it rather than the seller is able to set the price. See Sam Hornblower, Is Wal-Mart Good for America?, available at http://www.pbs.org/wgbh/pages/frontline/shows/walmart/secrets/pricing.html (last visited May 8, 2005).

n21. The increased number of mergers and acquisitions is not, of course, limited to agriculture. Industries ranging from book and newspaper publishing to grocery retail have seen similar rates of consolidation. See Edward S. Herman & Robert W. McChesney, The Global Media: The New Missionaries of Corporate Capitalism 43 (1997); William H. Borghesani Jr. et al., Food for Thought: The Emergence of Power Buyers and Its Challenge to Competition Analysis, 4 Stan. J.L. Bus. & Fin. 39, 46 (1998).

n22. See Roger A. McEowen, Peter C. Carstensen, and Neil E. Harl, The 2002 Senate Farm Bill: The Ban on Packer Ownership of Livestock, 7 Drake J. Agric. L. 267, 268 tbl.1 (2002).

n23. Business Editors, IBP Shareholders Approve Acquisition, Bus. Wire, Sept. 28, 2001, available at http://www.tysonfoodsinc.com/corporate/news/viewNews.asp?article=844 (last visited Apr. 25, 2005); David R. Moeller, The Problem of Agricultural Concentration: The Case of the Tyson-IBP Merger, 8 Drake J. Agric. L. 33 (2003).

n24. Barbara Murray, Smithfield Foods, Inc., Hoover's Online, at http://premium.hoovers.com/subscribe/co/factsheet.xhtml?ID=14734 (last visited Jan. 30, 2005). As evidenced by the Smithfield example, processors are often also producers. Both producer-only firms and producer-processor firms have experienced mergers at the producer level in recent years. V. James Rhodes, The Industrialization of Hog Production, in The Industrialization of Agriculture: Vertical Coordination in the U.S. Food System, supra note 13, at 217, 222 (describing Premium Standard Farms's acquisition of an out-of-state operation with seventeen thousand sows); see also Constance et al., supra note 11, at 83-85.

n25. Jerry Perkins, Pork Producer List Has Smithfield No. 1, Des Moines Reg., Oct. 17, 1999, at 4G.

n26. See Peter C. Carstensen, The Roles of Antitrust and Market Regulation Law in Markets for

Agricultural Products (July 25, 2003), at http://competitivemarkets.com/library/academic_reports/2003/7-25Carstensen.htm; Joy Powell, Hatch Asks U.S. to Take Closer Look at Farmland Deal, Minneapolis Star Trib., Aug. 2, 2003, at 1D. Control over a market alone is not enough to warrant prosecution; "a firm may lawfully have a monopoly, as long as the firm has not acquired it or maintained it illegally." Douglas Ross, U.S. Dep't of Justice, Antitrust Enforcement and Agriculture 12 (Aug. 20, 2002), available at www.usdoj.gov/atr/public/speeches/2004-17.pdf.

n27. McEowen et al., supra note 22, at 278-79; Moeller, supra note 23, at 36-38.

n28. See Jon Lauck, After Deregulation: Constructing Agricultural Policy in the Age of "Freedom to Farm," 5 Drake J. Agric. L. 3 (2000); Jon Lauck, Toward an Agrarian Antitrust: A New Direction for Agricultural Law, 75 N.D. L. Rev. 449 (1999). Agricultural antitrust laws include the Capper-Volstead Act, 7 U.S.C. 291-292 (2000) (excluding producers who form cooperatives from certain antitrust laws, as long as they do not conspire to create a monopoly) and the Packers and Stockyards Act, 7 U.S.C. 192 (2000) (specifying that packers may not engage in practices "with the effect of manipulating or controlling prices, or of creating a monopoly in the acquisition of, buying, selling, or dealing in, any article").

n29. See Jim Chen & Edward S. Adams, Feudalism Unmodified: Discourses on Farms and Firms, 45 Drake L. Rev. 361 (1997) (stating that antitakeover legislation destroys wealth, that "feudalism in the corporate setting, like in the agricultural setting, is a good thing," and that "none of the standard arguments favoring structural regulation of agriculture can withstand the mounting evidence that a feudalized farm sector will nevertheless protect the full range of social interests served by the United States' food production system"). Id. at 429, 402.

n30. What results is an hourglass-shaped market system in which there are many sellers and consumers and few processors and retailers in between. See W. Heffernan et al., Report to the National Farmer's Union: Consolidation in the Food and Agriculture System (Feb. 5, 1999), available at http://www.foodcircles.missouri.edu/whstudy.pdf.

n31. Jon Lauck, Concentration Concerns in the American Livestock Sector: Another Look at the Packers and Stockyards Act, National AgLaw Center Research Article, available at http://www.nationalaglawcenter.org/assets/articles/lauck_livestock.pdf (last visited Apr. 23, 2005).

n32. For example, Smithfield is the largest producer of hogs and processor of pork in the world. Smithfield Foods, Inc., Annual Report 2002 (July 12, 2002), available at http://www.smithfieldfoods.com/Investor/Pdf/AnnualReports/sfd_ar02.pdf. The company owns approximately

60% of the pigs it slaughters. Id.; see also Smithfield Foods, Inc. v. Miller, 241 F. Supp. 2d 978, 982 (S.D. Iowa 2003) (describing the vertical integration model of Smithfield). In addition, its subsidiary, Murphy Farms, produces pigs, which it sells to IBP, Inc., a subsidiary of Tyson, and a direct competitor of its parent, Smithfield. See McEowen et al., supra note 22, at 13.

n33. See, e.g., Neil D. Hamilton, Broiler Contracting in the United States - A Current Contract Analysis Addressing Legal Issues and Grower Concerns, 7 Drake J. Agric. L. 43 (2002) (using a survey of fourteen hundred broiler producers and sample production contracts to analyze producer-processor relationships) [hereinafter Hamilton, Broiler Contracting]; Neil D. Hamilton, State Regulation of Agricultural Production Contracts, 25 U. Mem. L. Rev. 1051, 1055 (1995) [hereinafter Hamilton, State Regulation]; Neil D. Hamilton, Why Own the Farm If You Can Own the Farmer (and the Crop)?: Contract Production and Intellectual Property Protection of Grain Crops, 73 Neb. L. Rev. 48 (1994).

n34. The Iowa Attorney General's website provides many examples of livestock production contracts. Iowa Attorney General, Iowa Dep't of Justice, Contracts, at http://www.state.ia.us/government/ag/working_for_farmers/contracts.html (last visited Mar. 25, 2004). In 1990, the Iowa legislature considered a bill that would have required the state to develop model livestock production contracts; producers could have compared these model contracts to a contract offered by an integrator, which would allow them to negotiate from an informed position. See Hamilton, State Regulation, supra note 33, at 1091-92.

n35. Iowa Attorney General, supra note 34.

n36. Id.

n37. Accountability may refer to both food safety and environmental issues. See Michael Boehlje & Lee F. Schrader, The Industrialization of Agriculture: Questions of Coordination, in The Industrialization of Agriculture: Vertical Coordination in the U.S. Food System, supra note 13, at 3, 8; see also Jesse D. Lyon, Coordinated Food Systems and Accountability Mechanisms for Food Safety: A Law and Economics Approach, 53 Food Drug L.J. 729, 729-31 (1998) (arguing that "vertical coordination...affords food manufacturers the ability to develop a food production and manufacturing process in which product identity is preserved, beginning with the genetic materials in agricultural production to the branded grocery product sold on the retail shelf").

n38. See, e.g., Size, Structure, and the Changing Face of American Agriculture (Arne Hallam ed., 1993);

Luther Tweeten, The Economies of Small Farms, 219 Science 1037-41 (1983). But see Thu & Durrenberger, supra note 10, at 10 ("Economies of scale are achieved in very modest-sized swine operations, and...size has little to do with efficiency of production and profitability."); Allan G. Mueller, Economies of Size in Hog Production: Is Size Related to Profitability?, Farm Econ., Apr. 1993, at 1.

n39. See Steve Martinez, Summary of Report: Vertical Coordination and Consumer Welfare: The Case of the Pork Industry (Aug. 1997), available at www.ers.usda.gov/publications/summaries/aer753.htm ("Net benefits to consumers are not a certainty, but the "industrialization' of the U.S. pork industry could lead to lower prices and larger supplies of higher quality pork products because of lower on-farm production costs, more efficient processing, and greater control over hog quality characteristics."). The retail price of beef in 2000 averaged $ 1.91/lb, compared with $ 2.54/lb in 1970 (unadjusted prices). See Economic Research Service, U.S. Dep't of Agric., Red Meat Yearbook tbl.86 (2004). However, when the price of live hogs fell in the mid-1990s to below Depression-era prices, retail prices did not follow, and processors maintained high profit margins, suggesting that integrators and retailers, not consumers, will benefit from the purported lower costs of contract production. See Bill Hord, Retail Prices Don't Reflect Farm Slump, Omaha World-Herald, Dec. 6, 1998, at 6A. McBride and Key suggest that increased costs associated with regulating contracts will be passed on to consumers. See McBride & Key, supra note 14, at iv.

n40. See generally McEowen et al., supra note 22. In addition, some studies have shown that diseconomies of scale apply when farms become so large that owners are no longer the primary managers. See, e.g., Willis L. Peterson, Are Large Farms More Efficient? (Jan. 1997) (Paper No. P97-2), at http://agecon.lib.umn.edu/cgi-bin/pdf_view.pl?paperid=130&ftype=.pdf.

n41. William J. Weida, Considering the Rationales for Factory Farming (Mar. 29, 2004), available at http://www.factoryfarm.org/docs/Foundations_of_Sand.doc (last visited Apr. 27, 2004).

n42. For example, while a meatpacker has an interest in stretching its quality standards for livestock it already owns, it is likely to maximize the quality of the livestock it purchases from outside sources.

n43. Note, Challenging Concentration of Control in the American Meat Industry, 117 Harv. L. Rev. 2643, 2655-56 (2004); McEowen et al., supra note 22, at 271.

n44. Id. at 278 ("Smithfield Foods, for example, purchased Murphy Farms and Carroll Foods. Many of the former Murphy hogs were, and continue to be, sold to IBP. This constitutes ongoing price communication between Smithfield and IBP via sales transactions that appear relatively innocent upon first observation."). A

jury recently found that IBP (now owned by Tyson) manipulated cattle prices through its contracts and recommended a $ 1.28 billion award to independent ranchers who had sold cattle to IBP on the spot market. A federal judge in Alabama ruled that Tyson will not have to pay the $ 1.28 billion. Judge Blocks Tyson Damages, Wash. Post, Mar. 24, 2004, at E2. There is disagreement over the implications of the judge's ruling. Compare David A. Domina, Proving Anti-Competitive Conduct in the U.S. Courtroom: The Plaintiff's Argument in Pickett v. Tyson Fresh Meats, Inc., 2 J. Agric. & Food Industrial Organization, article 8 (2004), and Thomas C. Green, Proving Anti-Competitive Conduct in the U.S. Courtroom: The Plaintiff's Argument in Pickett v. Tyson Fresh Meats, Inc.: Comment, 2 J. Agric. & Food Industrial Organization, article 11 (2004).

n45. See Weida, supra note 41; B. Edwards & A. Ladd, Environmental Justice, Swine Production and Farm Loss in North Carolina, 20 Social Spectrum 1 (2000); S. Wing, D. Cole, & G. Grant, Environmental Injustice in North Carolina's Hog Industry, 108 Envtl. Health Persp. 225 (2000). Infrastructure costs increase not just because of the potential for environmental cleanup, but also because industrial livestock production requires inputs from offsite that arrive on large trucks that damage local roads. Id. For example, only 25% (rather than the usual 70%) of property taxes generated by Paulding County, Ohio, dairies reaches local school districts; the remainder is used for road maintenance but does not cover the road damage associated with the dairies. Fran Henry, Breeding Contempt, The Plain Dealer (Cleveland), Nov. 27, 2004.

n46. See, e.g., United States v. Trans-Missouri Freight Ass'n, 166 U.S. 290, 324 (1897); Peter C. Carstensen, Concentration and the Destruction of Competition in Agricultural Markets: The Case for Change in Public Policy, 2000 Wis. L. Rev. 531, 532 (2000).

n47. National Agricultural Statistics Service, U.S. Dep't of Agric., Trends in U.S. Agriculture, available at http://www.usda.gov/nass/pubs/trends/broiler.htm (last visited Apr. 22, 2005).

n48. See Martinez, supra note 39.

n49. See Fatal Harvest: The Tragedy of Industrial Agriculture (Andrew Kimbell ed., 2002). In addition, from an environmental justice perspective, it is unfair to force impoverished communities (here, the rural poor) to bear the brunt of environmental costs of water and air pollution. See Weida, supra note 41. Indeed, there is some evidence that the largest producers shop for sites in locations with the least stringent environmental laws, which are often the areas most desperate for economic development in any form. Id.

n50. Neil D. Hamilton, A Farmer's Legal Guide to Production Contracts 131-33 (1995); Loic Sauvee, Toward an Institutional Analysis of Vertical Coordination in Agribusiness, in The Industrialization of

Agriculture: Vertical Coordination in the U.S. Food System, supra note 13, at 27, 49; Hamilton, State Regulation, supra note 33, at 1054; Edward P. Lord, Comment, Fairness for Modern Farmers: Reconsidering the Need for Legislation Governing Production Contracts, 33 Wake Forest L. Rev. 1125, 1129-36 (1998).

Negatively affected interest groups have been somewhat successful in addressing concerns about production contracts, including disparate bargaining power, through both political pressure and litigation. For example, a Minnesota statute prevents contracts from being canceled without cause, in at least some situations, until farmers have recovered their investments. Minn. Stat. Ann. 17.92 (West 1998). Tom Miller, the attorney general of Iowa, has focused extensively on the use of production contracts in the state and has provided farmers with information to increase their bargaining power. See News Release, Iowa Department of Justice, Miller Unveils Web Site with Production and Marketing Ag Contracts (June 29, 2000), available at http://www.iowaattorneygeneral.org/contractwebsite.htm. The Arkansas Supreme Court has ruled that the arbitration clauses in hog growers' contracts with Tyson are unenforceable because they are not mutually obligatory. Thus, some growers will be able to sue Tyson for costs associated with cancellation of their production contracts. Tyson Foods, Inc. v. Archer, 147 S.W.3d 681 (Ark. 2004).

n51. McBride & Key, supra note 14, at 9 tbl.1.

n52. Michelle B. Nowlin, NPDES Wet Weather Issues, Am. L. Inst., Oct. 24-25, 2002, at 90.

n53. Morrison, supra note 12, at 147. The buildings are climate controlled, with ventilation systems to rid the buildings of the chemical by-products of waste, such as ammonia, that are harmful to the animals. But the same pollutants harmful to livestock are thus released without processing, posing a threat to people living nearby.

n54. See Complaint filed by Plaintiff at 7-11, Iowa ex rel. v. Handlos, available at http://www.iowaattorneygeneral.org/latest_news/releases/mar_2004/Handlo_peti.pdf (last visited Apr. 16, 2004) (filed in Iowa District Court for Audubon County). Geographic concentration results because it is more economical for integrators to provide supplies and pick up livestock ready for slaughter when the operations are close together. Also, because of carry-over effects on neighboring land, the only potential buyers of land adjoining a CAFO may be others who wish to start confinement livestock operations. Raymond B. Palmquist et al., Hog Operations, Environmental Effects, and Residential Property Values, 73 Land Econ. 114, 114-24 (1997).

n55. McBride & Key, supra note 14, at 10.

n56. Marc Ribaudo, Managing Manure: New Clean Water Act Regulations Create Imperative for Livestock Producers, Amber Waves (U.S. Dep't of Agric., ed.), Feb. 2003, at 30, 33, available at http://ers.usda.gov/Amberwaves/Feb03/Features/ManagingManure.htm. Even if they used all of the acres available to them, more than half of the large producers in the Southeast would be overapplying animal waste to the land in terms of nutrient value. In the Midwest, where there is more agricultural land on which to spread the waste, "the additional costs of spreading manure over more farm acreage would reduce the economic performance of the hog operation." McBride & Key, supra note 14, at 41-42.

n57. Chen & Adams, supra note 29, at 382 (""Integration,' defined as the coordination or combination of formerly separate elements of economic activity, is the practical and metaphysical opposite of "independence.'").

n58. See Sierra Club, Inc. v. Tyson Foods, Inc., 299 F. Supp. 2d 693 (W.D. Ky. 2003); Water Keeper Alliance, Inc. v. Smithfield Foods, Inc., 2001 U.S. Dist. LEXIS 21314 (N.D.N.C. Sept. 20, 2001).

n59. Ultimately, the ability to pay cannot alone be the basis for assigning liability. However, if vertical integrators claim economies of scale as justification for the ever-increasing scale of livestock operations, they should also appreciate that the same economies of scale put them in the best position to mitigate environmental harms through waste treatment.

n60. For example, because there may be only one buyer in a particular geographic area, that buyer is able to dictate the terms of its contracts with growers. As a result, the contract items furnished by growers (e.g., buildings and equipment) are subject to quality accountability, but the inputs of the integrator (e.g., animals, feed, and medical care) are not. Decisions about these elements affect the environment. See Morrison, supra note 12, at 148.

n61. Jackson, supra note 1, at 105. "Prior to 1950, ... manure spreading was a universal practice, yet average annual groundwater nitrate levels were below three milligrams per liter." In 1983, the concentrations had increased to ten milligrams per liter. Id. at 113. See also Iowa Dep't of Natural Resources, Surface Water Monitoring and 303(D) Listing Evaluation: Interim Report 2 (2003), available at http://www.epa.gov/region7/water/pdf/iowa_interim_report.pdf. Note, however, that the application of nitrogen as fertilizer also increased over this period. Id. Claims that traditional livestock production is less environmentally damaging than confinement methods are hardly uncontroversial. See Luther Tweeten, Terrorism, Radicalism, and Populism in Agriculture 86 (2003) ("One of [the] myths ... is that the environment is damaged more by big farms than by small farms.").

n62. Jennifer Dukes Lee, Hog Odor Battles Head to Court, Des Moines Reg., Mar. 21, 2004, at 1A (reporting that there are at least fourteen suits currently filed against hog operations in Iowa and there were thirty-three mediated disputes between July 1, 2002, and June 30, 2003); Jennifer Dukes Lee, Livestock Farmers to Newcomers in Rural Iowa: Keep Your Distance, Des Moines Reg., Feb. 8, 2004, at 1A (raising the question whether most claims against livestock operations are brought by newcomers or those already established in the community); Jennifer Dukes Lee, Many in Town Turn Against Farmer After Learning of Hog Confinement, Des Moines Reg., Oct. 9, 2003, at 4B (describing the ambivalence of rural residents who fear the effects of confinement operations but hesitate to fight against longtime neighbors).

n63. Illinois State University, Livestock and Urban Waste Recycling, available at http://www.cast.ilstu.edu/ksmick/Compost/brochures/field/fieldday.htm (last visited Apr. 16, 2004).

n64. U.S. Envtl. Prot. Agency, Region 9: Animal Waste Management, available at http://www.epa.gov/region09/cross_pr/animalwaste/problem.html (last visited Apr. 16, 2004).

n65. U.S. Census Bureau, Population Change and Distribution: 1990 to 2000 (Apr. 2001), available at http://www.census.gov/prod/2001pubs/c2kbr01-2.pdf. Five hundred thousand hogs is an extreme number for a single producer, but is probably within reason given the expansive definition of "facility" in recent court cases. See, e.g., Sierra Club v. Seaboard Farms, Inc., 387 F. 3d 1167, 1170 (10th Cir. 2004); Sierra Club, Inc. v. Tyson Foods, Inc., 299 F. Supp. 2d 693, 706 (W.D. Ky. 2003).

n66. Ruhl, supra note 3, at 298.

n67. Jackson, supra note 1, at 105.

n68. Id. at 108.

n69. Theodore A. Feitshans & Kelly Zering, Federal Regulation of Animal and Poultry Production Under the Clean Water Act: Opportunities for Employing Economic Analysis to Improve Societal Results, 10 Pa. St. Envtl. L. Rev. 193, 212 (2002).

n70. Jackson, supra note 1, at 106.

n71. Iowa Department of Natural Resources, Fish Kills in Iowa: 1995-2004, available at http://www.iowadnr.com/water/tmdlwqa/wqa/downloads/iowafishkills.csv (last visited Apr. 9, 2005) (listing also 41 fish kills of unknown origin and 201 fish kills of other origin (e.g., natural causes, wastewater treatment plant releases), for a total of about 338 fish kills over approximately nine years). Although it is not clear from the data, probably not all of the fish kills attributed to livestock waste runoff resulted from releases from confinement production.

n72. Charles W. Abdalla et al., Community Conflicts Over Intensive Livestock Operations: How and Why Do Such Conflicts Escalate?, 7 Drake J. Agric. L. 7, 15 (2002). Note, however, that after the initial crisis, many of the regulations were dropped in North Carolina.

n73. Gary D. Robertson, N.C. Wrestles with Cause of Declining Waterway Health, Sun-News (Myrtle Beach, S.C.), July 8, 2003, at 7 (providing examples of polluted surface waters including rivers, lakes, and creeks).

n74. Anita K. Chancey, Comment, "Clean Water Act Compliance Audit Program for Pork Producers": How Was Such an Agreement Reached Between the EPA and the National Pork Producers?, 7 Mo. Envtl. L. & Pol'y Rev. 62, 64 (2000).

n75. Id.

n76. See, e.g., Peter S. Thorne, Air Quality Issues, in Iowa Concentrated Animal Feeding Operations Air Quality Study 41-42 (2002).

n77. See 42 U.S.C. 7401-7700 (2000).

n78. In part, monitoring pollution is easier because there are fewer large operations (rather than many disparate sources) to evaluate. In addition, although it may be possible to assess air pollution resulting from animal waste applied to fields, it is much more feasible to measure emissions from the large waste lagoons and

the ventilation systems used to remove chemicals from the confinement buildings that might otherwise harm the livestock.

n79. Kelley J. Donham, The Impact of Industrial Swine Production on Human Health, in Pigs, Profits, and Rural Communities, supra note 1, at 73-81.

n80. Jackson, supra note 1, at 108.

n81. C.M. Williams, CAFOs: Issues and Development of New Waste Treatment Technology, 10 Pa. St. Envtl. L. Rev. 217, 221-22 (2002).

n82. James A. Merchant et al., Asthma and Farm Exposures in a Cohort of Rural Iowa Children, 113 Envtl. Health Persp. 350 (2005); Susan S. Schiffman et al., Mood Changes Experienced by Persons Living Near Commercial Swine Operations, in Pigs, Profits, and Rural Communities, supra note 1, at 92; Steven Wing & Susan Wolf, Intensive Livestock Operations, Health, and Quality of Life Among Eastern North Carolina Residents, 108 Envtl. Health Persp. 233-38 (2000); Perry Beeman, Study Links Hog Odor, Weak Immune System, Des Moines Reg., Apr. 1, 2004, at 6B; Public Conference, Environmental Health Sciences Research Center, University of Iowa, Environmental Health Impacts of CAFOs: Anticipating Hazards - Searching for Solutions, Mar. 29, 2004.

n83. Williams, supra note 81, at 221-22 (describing the means by which the pollutants are produced and emitted and providing rough estimates of the amounts produced per hog); D. Compagna et al., Ambient Hydrogen Sulfide, Total Reduced Sulfur, and Hospital Visits for Respiratory Diseases in Northeast Nebraska, 1998-2000, 14 J. Exposure Analysis & Envtl. Epidemiology 180 (2004); Jim Johnson, Handling Manure a Chore Unto Itself, Waste News, Sept. 29, 2003, at 1; Merchant et al., supra note 82.

n84. Anna M. Fan & Valerie E. Steinberg, Health Implications of Nitrate and Nitrite in Drinking Water: An Update on Methemoglobinemia Occurrence and Reproductive and Developmental Toxicity, 23 Reg. Toxicology & Pharmacology 35 (1996).

n85. Henry, supra note 45.

n86. Merchant et al., supra note 82; Marc B. Schenker et al., Respiratory Health Hazards in Agriculture, 158 Am. J. Respiratory & Critical Care Medicine S1 (1998).

n87. Id.

n88. See City of Tulsa v. Tyson Foods, Inc., 258 F. Supp. 2d 1263 (N.D. Okla. 2003) (vacated pursuant to settlement).

n89. Janet Roloff, Dead Waters, 165 Sci. News 360 (2004).

n90. The fact that advocacy groups make economic efficiency the basis of their argument against large-scale confinement livestock production is somewhat ironic; economic theory is often the basis for agribusiness arguments against both environmental regulation and small-scale agriculture.

n91. Weida, supra note 41.

n92. Id. Whether large confinement operations are more efficient than traditional models of hog production is a hotly debated issue. On the one hand, basic principles of economics would suggest economies of scale favor large producers, up to a point of diminishing returns. A trend toward large confinement operations strongly indicates that they are the most economically efficient model for hog production. See McBride & Key, supra note 14, at 15. Some researchers suggest, however, that the size of the operation has less impact on the economic efficiency of an operation than do other factors, and these analyses do not account for the added environmental costs of confinement operations. See Thu & Durrenberger, supra note 10.

n93. Weida, supra note 41.

n94. Neil D. Hamilton, Feeding Our Future: Six Philosophical Issues Shaping Agricultural Law, 72 Neb. L. Rev. 210, 220 (1993).

n95. See, e.g., Iowa Code Ann. 352.1, 657.11 (1999); 3 Pa. Cons. Stat. Ann. 951 (West 1995); Wis. Stat. Ann. 823.08 (1994). See generally Neil D. Hamilton, A Livestock Producer's Legal Guide to Nuisance, Land Use Control, and Environmental Law (1992).

n96. Jesse J. Richardson Jr. & Theodore A. Feitshans, Nuisance Revisited After Buchanan and Bormann, 5 Drake J. Agric. L. 121 (2000).

n97. See Gacke v. Pork Xtra, L.L.C., 684 N.W.2d 168 (Iowa 2004); Bormann v. Bd. of Supervisors, 584 N.W.2d 309 (Iowa 1998).

n98. See, e.g., Overgaard v. Rock County Bd. of Comm'rs, 2003 WL 21744235 (D. Minn., July 25, 2003), at 4-5.

n99. See Alexander A. Reinert, Note, The Right to Farm: Hog-Tied and Nuisance-Bound, 73 N.Y.U. L. Rev. 1694, 1720-21 (1998) ("In statutes that rely on generally accepted practices, it is often unclear who determines these practices and who bears the burden of proving that a certain practice is generally accepted.").

n100. See, e.g., Alan O. Sykes, The Boundaries of Vicarious Liability: An Economic Analysis of the Scope of Employment Rule and Related Legal Doctrines, 101 Harv. L. Rev. 563, 563 (1988).

n101. In that sense, it resembles a franchisor-franchisee relationship. See John L. Hanks, Franchisor Liability for the Torts of Its Franchisees: The Case for Substituting Liability as a Guarantor for the Current Vicarious Liability, 24 Okla. City U. L. Rev. 1 (1999). See also discussion infra Part IV.B.

n102. 2002 WL 31924522 (D. Minn. Dec. 30, 2002).

n103. Id.

n104. 783 So. 2d 804 (Ala. 2000).

n105. Id. at 809.

n106. Id.

n107. 258 F. Supp. 2d 1263, 1296-97 (N.D. Okla. 2003), vacated by 2003 U.S. Dist. LEXIS 23416 (N.D. Okla. July 16, 2003).

n108. Id. at 1294-95 (citations omitted).

n109. Id. at 1296-97.

n110. 574 S.E. 2d 48, 53-54 (N.C. Ct. App. 2002). Cf. Friends of the Earth, Inc. v. Laidlaw Envtl. Servs., 528 U.S. 167, 183-84 (2000) (finding that recreational and aesthetic harms were sufficient to establish standing under the federal Constitution).

n111. See discussion infra at Part III.F.

n112. Weida, supra note 41.

n113. S.D. Codified Laws 20-9-30 (Michie 1995).

n114. See, e.g., Iowa Code 9H.2 (1995) (banning packer ownership, operation, or control of a feedlot). A federal district court struck down the law as an unconstitutional burden on interstate commerce. Smithfield Foods, Inc. v. Miller, 241 F. Supp. 2d 978 (S.D. Iowa 2003), vacated by 367 F.3d 1061 (8th Cir. 2004).

Minnesota, Nebraska, and South Dakota have provisions with similar effect. See McEowan et al., supra note 22, at 285. Their constitutionality is unclear following the Iowa case. A federal provision banning packer ownership of livestock was left out of the 2002 Farm Bill because the House and Senate could not agree on its inclusion. Id. at 301.

n115. See, e.g., supra note 50.

n116. 42 U.S.C. 9601-9675.

n117. Id.

n118. See, e.g., B.F. Goodrich v. Murtha, 958 F.2d 1192, 1197 (2d Cir. 1992).

n119. Its apparent usefulness stems in part from what some courts have termed its "strict liability," and thus its ability to reach all potentially responsible parties. United States v. Monsanto Co., 858 F.2d 160 (4th Cir. 1988).

n120. 42 U.S.C. 9601(22)(D).

n121. 42 U.S.C. 9603(a). Note, however, that regulations promulgated by the EPA in early 2005 may immunize confinement livestock producers from these reporting requirements in exchange for data on emissions from confinement livestock facilities. See infra Part III.F.

n122. Id.; see also H.R. Rep. No. 99-962 (1986).

n123. Sierra Club, Inc. v. Tyson Foods, Inc., 299 F. Supp. 2d 693, 706 (W.D. Ky. 2003).

n124. Id. Besides finding that Tyson could be held liable as an operator where it controlled the operations of the confinement livestock facility, the court also defined a facility under CERCLA to include all of the confinement buildings on contiguous properties that were "controlled" by Tyson. Id. at 709, 720. See also Sierra Club v. Seaboard Farms, Inc., 387 F. 3d 1167, 1170 (10th Cir. 2004).

n125. 524 U.S. 51 (1998).

n126. Sierra Club, 299 F. Supp. 2d at 720.

n127. On January 26, 2005, Sierra Club filed a consent decree in which Tyson agreed to study and report on the levels of emissions from its operations and to reduce ammonia emissions, at a cost of $ 500,000. Sierra Club, Tyson Forced to Clean Up Its Act, available at www.sierraclub.org/environmentallaw/lawsuits/viewCase.asp?id=160 (last visited Apr. 8, 2005).

n128. 42 U.S.C. 9603(a).

n129. Brief for Plaintiff at 17, Sierra Club, Inc. v. Tyson Foods, Inc., 299 F. Supp. 2d 693 (W.D. Ky. 2003) (No. 4:02CV-73-M) (citing United States v. Carr, 880 F.2d 1550, 1554-55 (2d Cir. 1989)).

n130. Id. at 21.

n131. Id. at 21-22.

n132. City of Tulsa v. Tyson Foods, Inc., 258 F. Supp. 2d 1263 (N.D. Okla. 2003) (vacated pursuant to settlement).

n133. Id. at 1270.

n134. Id. at 1282.

n135. Id. at 1283.

n136. Id. at 1287-88 (citing CERCLA, 42 U.S.C. 9601(22)(D) (2000)).

n137. Id. at 1287.

n138. Id. at 1287 n.15 (quoting S. Rep. No. 96-848, at 46 (1980) (emphasis added)).

n139. Id. at 1288.

n140. Id.

n141. 299 F. Supp. 2d 693, 706 (W.D. Ky. 2003).

n142. United States v. Bestfoods, 524 U.S. 51 (1998).

n143. Id.

n144. Id. at 66-67.

n145. See Hamilton, Broiler Contracting, supra note 33. Some agricultural economists have suggested that integrators who contract with growers who have little land are likely involved in manure management with those growers. McBride & Key, supra note 14, at 60. Manure management involves analysis of the amounts of manure produced, the nutrient content of the manure, and the acreage over which the manure will be spread. Iowa Dep't of Natural Resources, Animal Feeding Operations, at http://www.iowadnr.com/afo/mmp.html (last visited Dec. 27, 2004).

n146. See Brian Richert & Alan Sutton, Nutritional Strategies for Reducing Manure DM, N, and P Concentrations, available at http://pasture.ecn.purdue.edu/%7Eepados/swine/pubs/nutriman.htm (last visited Apr. 24, 2005). These excess nutrients (such as nitrogen or phosphorus in amounts greater than the soil can absorb) are waste products.

n147. Id.

n148. See, e.g., Sierra Club, Inc. v. Tyson Foods, Inc., 299 F. Supp. 2d 693 (W.D. Ky. 2003).

n149. See Michael M. Meloy, An Overview of Nutrient Management Requirements in Pennsylvania, 10 Pa. St. Envtl. L. Rev. 249, 254 n.12 (2002); see also Sierra Club, 299 F. Supp. 2d 693.

n150. 33 U.S.C. 1251-1387 (2000); Clifford Rechtschaffen, Enforcing the Clean Water Act in the Twenty-First Century: Harnessing the Power of the Public Spotlight, 55 Ala. L. Rev. 775 (2004).

n151. 33 U.S.C. 1251-1387.

n152. A point source is any "discernable, confined and discrete conveyance, including ... any ... concentrated animal feeding operation ... from which pollutants are or may be discharged." 33 U.S.C. 1362(14). It is significant that confinement livestock production is the only industry specifically labeled as a point source in the CWA. See Brief for Plaintiff at 13, Water Keeper Alliance, Inc. v. Smithfield Foods, Inc. (No. 4:01-CV-30-H(3)), 2001 U.S.D. LEXIS 21314 (E.D.N.C. Sept. 20, 2001).

To qualify as a CAFO, an animal feeding operation must confine the animals inside a building or on a dry lot - that is, a cement lot or dirt lot that cannot produce vegetation because of the concentration of animals kept on its surface. CWA regulations define CAFOs according to a three-tier system. Operations confining a

sufficient number of livestock to qualify as Large CAFOs generally require NPDES permitting; Medium and Small CAFOs are similarly defined according to the number of animals confined and may require permits if they discharge waste through a man-made device (Medium CAFOs) or if the permitting authority otherwise finds that the CAFO is likely to discharge (Small CAFOs). 40 C.F.R. 122.23 (2003).

n153. 40 C.F.R. 412.4(c)(2).

n154. National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitations Guidelines and Standards for Concentrated Animal Feeding Operations, 66 Fed. Reg. 2968-69, 3080 (proposed Jan. 12, 2001) (to be codified at 40 C.F.R. pts. 122, 412) [hereinafter National Pollutant].

n155. National Pollutant, supra note 154, at 7176. See Terence J. Centner, Enforcing Environmental Regulations: Concentrated Animal Feeding Operations, 69 Mo. L. Rev. 697 (2004). But see Waterkeeper Alliance, Inc. v. U.S. Envtl. Prot. Agency, 399 F.3d 486 (2d. Cir. 2005) (holding that the EPA does not have jurisdiction to require that CAFOs either obtain permits or prove they do not have the potential to discharge).

n156. Waterkeeper, 399 F.3d at 496.

n157. 40 C.F.R. 122.23, 122.28.

n158. Although these attempts to require joint permitting have been largely unsuccessful, they provide further evidence of governmental concern that the public not bear the costs of environmental cleanup.

n159. 33 U.S.C. 1362(14). The EPA's regulations limit the stormwater exemption to nonpoint sources. Water Keeper, 2001 U.S. Dist. LEXIS at 11. Further, they provide an exemption only for discharges "composed entirely of stormwater." U.S. Envtl. Prot. Agency, Public Commenter's Guide to the Proposed New CAFO Regulations 8 (2001).

n160. Michael Steeves, The EPA's Proposed CAFO Regulations Fall Short of Ensuring the Integrity of Our Nation's Waters, 22 J. Land Resources & Envtl. L. 367, 386 (2002).

n161. 34 F.3d 114 (2d Cir. 1994).

n162. Id. at 121; see also Maple Leaf Farms, Inc. v. State, 633 N.W.2d 720, 729 (Wis. Ct. App. 2001) ("We conclude that the legislature has conferred authority on the DNR to regulate discharges, in the form of overapplication of manure, by CAFOs."); Cmty. Ass'n for Restoration of the Env't v. Henry Bosma Dairy, 65 F. Supp. 2d 1129 (E.D. Wash. 1999); Citizens Legal Envtl. Action Network, Inc. v. Premium Standard Farms, 2000 U.S. Dist. LEXIS 1990, at 22 (W.D. Mo. Feb. 23, 2000).

n163. Southview Farm, 34 F.3d at 122 (quoting S. Rep. No. 95-217, 95th Cong., 1st Sess. 35 (1977), reprinted in 1977 U.S.C.C.A.N. 4326, 4360).

n164. 2001 U.S. Dist. LEXIS 21314, at 15 (E.D.N.C. Sept. 20, 2001). The court will not decide the case on its merits for some time. E-mail from Jeffrey Odefey, Water Keeper Alliance, to author (Mar. 30, 2004) (on file with author). Liability under RCRA is described in detail below. In brief, RCRA provides for liability for generators, transporters, and disposal sites of hazardous substances and offers a means to track such substances from cradle to grave.

n165. Sprayfields are fields used exclusively for the management of animal waste; no crops of independent value are grown on these fields.

n166. 2001 U.S. Dist. LEXIS 21314, at 11 (Sept. 20, 2001). The agricultural stormwater exemption is found at 33 U.S.C. 1362(14).

n167. Southview Farm, 34 F.3d at 122-23; Water Keeper, 2001 U.S. Dist. LEXIS 21314 at 11.

n168. Water Keeper, 2001 U.S. Dist. LEXIS 21314 at 10-11.

n169. Concerned Area Residents for the Env't v. Southview Farm, 834 F. Supp. 1410, 1418 (W.D.N.Y.

1993) ("Notwithstanding that it may result from such natural phenomena as rainfall and gravity, the surface run-off of contaminated waters, once channeled and collected, constitutes discharge by a point source."); Water Keeper, 2001 U.S. Dist. LEXIS 21314 at 11-12.

n170. Water Keeper, 2001 U.S. Dist. LEXIS 21314 at 11.

n171. Waterkeeper Alliance, Inc. v. U.S. Envtl. Prot. Agency, 399 F.3d 486, 498-504 (2d Cir. 2005).

n172. Id. at 504.

n173. Id.

n174. See 33 U.S.C. 1362(14).

n175. Nowlin, supra note 52, at 90. The initial result was the USDA-EPA Unified National Strategy for Animal Feeding Operations, followed relatively quickly by the Draft Guidance Manual and Example NPDES for CAFOs. Id.

n176. 66 Fed. Reg. 2960 (2001).

n177. See 40 C.F.R. 122.23 (2004).

n178. "Owner or operator means the owner or operator of any "facility or activity' subject to regulation under the NPDES program." 40 C.F.R. 122.2 (2004).

n179. 66 Fed. Reg. 3136 (2001); see also Rebecca P. Lewandoski, Spreading the Liability Net: Overcoming

Agricultural Exemption with EPA's Proposed Co-Permitting Regulation Under the Clean Water Act, 27 Vt. L. Rev. 149, 164 (2002) (stating that this provision was in the proposed rules for 40 C.F.R. 122.23(c)(3) (2004)). Because most production contracts assign ownership of the livestock and food to the integrator and the dead animals and waste to the grower, integrators currently have an economic incentive to overration phosphorus in the feed to maximize livestock growth because they have no liability for the phosphorus that eventually makes its way into the environment. Chris Boessen et al., Co-Permitting Provisions in the Proposed Revisions to the NPDES Permit Regulation and Effluent Guidelines and Standards for CAFOs, in Economic Viability of US Swine Farms Implementing Water Quality Best Available Technologies, 7-5 and 7-6 (R. Massey et al. eds., 2001).

n180. See, e.g., Iowa Attorney General, supra note 34.

n181. National Pollutant, supra note 154, at 2960.

n182. Id. at 3024. "The Agency looks for guidance in the definitions of the term in other sections of the statute: The term owner or operator means any person who owns, leases, operates, controls, or supervises a source." Id. (internal citation omitted).

n183. United States v. Sargent County Water Resources Dist., 876 F. Supp. 1081, 1088 (D.N.D. 1992); see also United States v. Lambert, 915 F. Supp. 797, 802 (S.D. W. Va. 1996).

n184. See National Pollutant, supra note 154, at 3024.

n185. Id. at 3024-25.

n186. Id. at 3025.

n187. Anita Huslin, Md. Aims to Tighten Chicken Waste Rules, Wash. Post, Aug. 9, 2000, at B1.

n188. Josh Marks, Comment, Regulating Agricultural Pollution in Georgia: Recent Trends and the Debate over Integrator Liability, 18 Ga. St. U. L. Rev. 1031, 1052 (2002) (internal citation omitted).

n189. Press Release, Maryland Office of the Governor, Poultry Industry Co-Permitting Requirements Rejected (June 13, 2003), available at http://www.gov.state.md.us/pressreleases/2003/061303_poultry.html; Anita Huslin, Maryland Governor Ehrlich Eases Liability for Big Chicken Farms; Drops Policy on Manure Runoff in Bay, Wash. Post, June 14, 2003, at A1.

n190. Marks, supra note 188, at 1055.

n191. Kentucky Administrative Regulation Review Subcommittee, Meeting of Aug. 1, 2000, available at http://162.114.4.13/statcomm/adminreg/000801.htm.

n192. Hamilton, State Regulation, supra note 33, at 1087; Marks, supra note 188, at 1060-65.

n193. See National Pollutant, supra note 154, at 3023-27; see also supra Part III.D.2.a.

n194. 42 U.S.C. 6903(5)(A)-(B) (2000).

n195. 42 U.S.C. 6903(27). Note, however, that because relatively few CAFOs have actually obtained NPDES permits, RCRA might offer a basis for ensuring that livestock growers and integrators internalize the costs of their pollution.

n196. 834 F. Supp. 1410, 1417 (W.D.N.Y. 1993).

n197. 2001 U.S. Dist. LEXIS 21314 (No. 4:01-CV-30-H(3)) (E.D.N.C. Sept. 20, 2001).

n198. Id. at 13.

n199. Id. at 12-13.

n200. "Crop" is defined as "a plant or animal or plant or animal product that can be grown and harvested extensively for profit or subsistence." Merriam-Webster's Collegiate Dictionary 276 (10th ed. 1993). Bermudagrass is not harvested, and livestock producers who grow it do not do so for profit. Because they do not use the Bermudagrass for purposes other than to absorb animal waste, there is no independent reason to apply the waste as fertilizer, and the exemption does not apply. In fact, the Bermudagrass probably cannot be fed to livestock because of the possibility of heavy metals or other contamination. See Brief for Plaintiff at 18-21, Water Keeper (No. 4:01-CV-30-H(3)).

n201. Id. at 18-19. Less partisan commentators also suggest that land application of animal waste is "more for disposal than nutrient value" on large operations. See McBride & Key, supra note 14, at 41.

n202. Brief for Plaintiff at 19, Water Keeper (No. 4:01-CV-30-H(3)).

n203. Id. at 19-20.

n204. Owen Elec. Steel Co. of South Carolina v. Browner, 37 F.3d 146, 149-50 (4th Cir. 1994).

n205. See 42 U.S.C. 7401-7700 (2000). Unlike other major environmental laws, the CWA does not include any express exemptions for agriculture. Joseph A. Miller, Contracting in Agriculture: Potential Problems, 8 Drake J. Agric. L. 57, 84 (2003).

n206. Ruhl, supra note 3, at 305.

n207. Williams, supra note 81, at 221-22 (describing the means by which the pollutants are produced and

emitted and providing rough estimates of the amounts produced per hog).

n208. See, e.g., Environmental Health Sciences Research Center, University of Iowa, Iowa Concentrated Animal Feeding Operations Air Quality Study (Feb. 2002), available at http://www.public-health.uiowa.edu/ehsrc/CAFOstudy.htm.

n209. See Press Release, Dep't of Justice, Nation's Second Largest Hog Producer Reaches Settlement with U.S. & Citizen's Group (Nov. 20, 2001), available at http://www.usdoj.gov/opa/pr/2001/November/01_enrd_604.htm.

n210. Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. 4957 (Jan. 31, 2005). See 42 U.S.C. 7414(a) (providing authority for the EPA Administrator to require sources to monitor and report on emissions).

n211. The National Pork Producers Council has contributed $ 6 million of checkoff funds to the study. Iowa Pork Producers Ass'n, Air Emission Consent Agreement - What Iowa Producers Need to Know, available at www.iowapork.org/download/IPP-0503.pdf (last visited Apr. 8, 2005). Every hog producer, not just those who produce hogs in confinement, must contribute $ 1 per head to the national checkoff program. Consequently, small farmers are paying the costs of environmental compliance by CAFOs even though they have not adopted the confinement model. The Sixth Circuit has held that the checkoff program violates First Amendment free speech rights. Michigan Pork Producers Ass'n v. Veneman, 348 F.3d 157, 162-63 (6th Cir. 2003).

n212. The order suggests that the agreement "resolves Respondent's civil liability for certain potential violations of the Clean Air Act, CERCLA, and/or EPCRA." 70 Fed. Reg. 4958, 4962. This provision appears to violate the CAA, which precludes citizen suits only when the EPA diligently prosecutes an action in court. 42 U.S.C. 7604(b)(1)(B).

n213. U.S. Environmental Protection Agency, Air Quality Compliance Agreement for Animal Feeding Operations, available at www.epa.gov/compliance/resources/agreements/caa/cafo_agr_0501.html (last visited Apr. 8, 2005).

n214. An early case finding grower liability under the Texas Clean Air Act is Southwest Livestock & Trucking Co. v. Texas Air Control Bd., 579 S.W.2d 549 (Tex. Civ. App. 1979). But see F/R Cattle Co. v. State,

866 S.W.2d 200 (Tex. 1993). The Texas Clean Air Act essentially implements the federal Clean Air Act. See Arnold W. Reitze Jr., Air Quality Protection Using State Implementation Plans: Thirty-Seven Years of Increasing Complexity, 15 Vill. Envtl. L.J. 209, 211 (2004).

n215. Williams, supra note 81, at 222, 225.

n216. See Sierra Club, Inc. v. Tyson Foods, Inc., 299 F. Supp. 2d 693, 720 (W.D. Ky. 2003) (finding the integrator Tyson Foods liable).

n217. McBride & Key, supra note 14, at iii.

n218. Douglas R. Williams, When Voluntary, Incentive-Based Controls Fail: Structuring a Regulatory Response to Agricultural Nonpoint Source Water Pollution, 9 Wash. U. J.L. & Pol'y 21, 21 (2002).

n219. Hamilton, Broiler Contracting, supra note 33, at 43.

n220. Id.

n221. The situation is roughly equal to an individual seeking employment when the unemployment rate is extremely high.

n222. One of the reasons to integrate is to reduce transaction costs such as those that arise from accessing information about various stages of production. See Boehlje & Shrader, supra note 37, at 8.

n223. Whether the animal waste is a benefit or cost to the grower who contracts with an integrator has been debated. Integrators have argued that copermitting would take a benefit from producers. John E. Starkey, Co-Permitting: A Bad Idea for Integrators and Growers Alike (June 2001), available at www.poultryegg.org/environment/docs/Co-Permitting.pdf (last visited Apr. 2, 2004). See generally National

Pollutant, supra note 154, at 2960; Tomislav Vukina & William E. Foster, Grower Response to Broiler Production Contract Design, in The Industrialization of Agriculture: Vertical Coordination in the U.S. Food System, supra note 13, at 133, 138; Mindy Larsen Poldberg, A Practitioner's Guide to Iowa Manure Laws, Manure Regulations, and Manure Application Agreements, 3 Drake J. Agric. L. 433, 463 (1998); Marks, supra note 188, at 1038; Nicholas M. White, Comment, Industry-Based Solutions to Industry-Specific Pollution: Finding Sustainable Solutions to Pollution from Livestock Waste, 15 Colo. J. Int'l Envtl. L. & Pol'y 153 (2004).

n224. Charles Fried, Contract as Promise: A Theory of Contractual Obligation 20-21 (1981).

n225. Mark Pettit Jr., Freedom, Freedom to Contract, and the "Rise and Fall," 79 B.U. L. Rev. 263, 281 (1999).

n226. See Anthony T. Kronman, Paternalism and the Law of Contracts, 92 Yale L.J. 763 (1983).

n227. Anita Huslin, Poultry Growers Rattled; Tyson's Departure Clouds Future, Wash. Post, July 7, 2003, at B1 (quoting a poultry grower as stating that "every single grower has their home tied to their chicken houses").

n228. Protections against such losses already exist in homestead exemptions from bankruptcy proceedings, for example. See, e.g., Cal. Civ. Proc. Code 703.140 (2004).

n229. Note, however, that growers do not have a great deal of choice in these situations. First, in the most integrated sectors, it is almost impossible to sell livestock without a production contract. Second, the production contracts often contain almost identical terms, the vast majority of which are not negotiable and are dictated by the integrator. Finally, evidence suggests that many farmers enter into production contracts as a last chance to save a family farm, including the family's home. These circumstances are hardly the kinds of conditions that would yield the most efficient outcome for society. See Randi Ilyse Roth, Redressing Unfairness in the New Agricultural Labor Arrangements: An Overview of Litigation Seeking Remedies for Contract Poultry Growers, 25 U. Mem. L. Rev. 1207 (1995).

n230. Many courts have interpreted the Uniform Commercial Code not to apply to farmers because they have defined farmers as something other than merchants - for example, as "tillers of the soil." See Chen & Adams, supra note 29, at 390. Arguing against such paternalism, Chen and Adams say

Agrarians cannot have it both ways: either the freehold farmer is an inherently superior manager, subject to all of the rights and obligations of full-fledged membership in the mercantile community of commerce, or the farmer is a judicially protected ward in one of the common law's various categories of individuals who are considered incompetent to enter binding contracts.

Id.

n231. In some senses, contract farmers can be compared to franchisees, see infra, who also are sometimes treated differently from other business owners. See Lee A. Rau, Implied Obligations in Franchising: Beyond Terminations, 47 Bus. Law. 1053, 1071 (1991-1992) (suggesting that freedom of contract should not trump when "the risks involved have been disclosed to the franchisee, the franchisee has freely assumed those risks and the franchisor has been honest in its dealings with the franchisee"). One option is to approach production contracts from a consumer-protection perspective, as France and Britain have done. Hamilton, State Regulation, supra note 33, at 1101.

n232. The assumption is that if growers alone were held liable, almost none would have the resources to clean up contaminated property. The typical contract farmer takes on hundreds of thousands of dollars of debt to finance facility construction and system updates and may take in roughly the same income as if he or she worked at a fast-food restaurant. See Lord, supra note 50, at 1130.

n233. See Chris Clayton, Hog Lots May Face Tougher Controls, Omaha World-Herald, Jan. 21, 2004, at D1 (describing 1100 abandoned waste lagoons in North Carolina awaiting cleanup).

n234. Pettit, supra note 225, at 281.

n235. Sarah Howard Jenkins, 13 Corbin on Contracts: Discharge 68.9 (Joseph M. Perillo ed., 2003). The purpose of the integrator relationship differs from that of a franchise relationship in that the franchisee interacts with the public on behalf of the franchisor to market the franchisor's goods or services, whereas the grower is not a visible public representative of the integrator and simply provides products for the integrator to market under its own name.

A defining characteristic of a franchise is its public association with the trade name, trademark, or advertising of the franchisor. See generally Randall K. Hanson, The Franchising Dilemma Continues: Update on Franchisor Liability for Wrongful Acts by Local Franchisees, 20 Campbell L. Rev. 91 (1997). This protection of the franchisor's intellectual property is the rationale behind allowing the franchisor to exercise control over many aspects of the franchisee's day-to-day operations. Jenkins, supra. This ability to control, combined with

consumer reliance on the franchisor's good name and financial backing, is the rationale behind making franchisors liable, in at least some circumstances, for the torts of their franchisees. In this regard, the integrator relationship differs dramatically from the franchise relationship because the only intellectual property to be protected in the former situation relates to inputs to production (e.g., breeding stock, feed ration formulas) rather than public activity that might reflect negatively on the integrator. A confinement livestock grower who acts tortiously by maintaining a nuisance or trespassing on the land of a neighbor may not provide any indicia of connection to the integrator for whom the grower raises livestock. Ultimately, the control exercised by integrators has a less persuasive basis than exists in the franchise relationship where actions by the franchisee may reflect on and make the franchisor vulnerable to lawsuits. That integrators do not need protection of their good names suggests ulterior motives for using a business structure that gives them control without accompanying responsibility.

n236. Debra Burke & E. Malcolm Abel II, Franchising Fraud: The Continuing Need for Reform, 40 Am. Bus. L.J. 355, 356 (2003).

n237. Id. at 361.

n238. The Agricultural Fair Practices Act, 7 U.S.C. 2301-2306 (2000), which protects farmers' rights to join producer association groups, was enacted in part to address grower-integrator imbalances of power, but it is not limited to the production contract context. See Roth, supra note 229, at 1223.

n239. Burke & Abel, supra note 236.

n240. See supra note 50.

n241. Michael R. Flynn, Note, The Law of Franchisor Vicarious Liability: A Critique, 1993 Colum. Bus. L. Rev. 89, 91, 93 n.21 (1993) (citation omitted).

n242. The difference is historical: chickens have generally been produced on a somewhat smaller scale, by poorer farmers.

n243. Flynn, supra note 241, at 97.

n244. Id. at 91.

n245. Id.

n246. Id.

n247. Id. at 93; Hanson, supra note 235, at 99.

n248. Flynn bases this theory of franchisors and franchisees on Judge Learned Hand's rule of negligence to ensure an efficient level of care. Flynn, supra note 241, at 93 n.21.

n249. Id. In a best case scenario for the environment, growers would feed animals a diet that produces an ideal balance of nutrients to fertilize the soil while also efficiently increasing animal weight. In the case of production contracts, the content of feed may be considered proprietary information, so that growers may not ultimately know the amounts of antibiotics or heavy minerals the waste contains, even though they are responsible for any pollutants released.

n250. In an economically efficient system, the cost of a product reflects all production costs. Barbara White, Coase and the Courts: Economics for the Common Man, 72 Iowa L. Rev. 577 (1987).

n251. Lord, supra note 50.

n252. White, supra note 250.

n253. Id. If environmental laws are enforced against confinement operations, integrators will have to become more involved in manure management or contract growers will have to increase their access to capital. See McBride & Key, supra note 14, at iv. Because most contract growers have already mortgaged both their land and their homes to build grow facilities, they are unlikely to be able to borrow more money to provide waste treatment.

n254. See National Pollutant, supra note 154.

n255. Id. at 3026. However, there is at least some likelihood that integrators would provide such services without copermitting as a result of market mechanisms, as evidenced by a few integrators providing such services. Id.

n256. Letter from Michelle Nowlin, Southern Environmental Law Center, to Gregory Beatty, U.S. Environmental Protection Agency, regarding Proposed CAFO Regulations (July 27, 2001), available at http://www.southernenvironment.org/pdfs/SELC%27s_CAFO_Comments.pdf.

n257. See National Pollutant, supra note 154, at 3026.

n258. It is interesting that producers see themselves as responsible for the pollution, especially given that they do not have control over the building design, the food and medication provided to the animals, or ultimately the number of animals they produce. However, one cannot discount the physical control exercised by growers. After all, growers and their employees are in the best position to prevent and mitigate some releases, including those from overfilled lagoons and those resulting from broken pipes.

n259. See Neil D. Hamilton, Agriculture Without Farmers? Is Industrialization Restructuring American Food Production and Threatening the Future of Sustainable Agriculture?, 14 N. Ill. U. L. Rev. 613 (1994).

n260. However, given their sunk costs in confinement buildings, it would be difficult for some to make the transition.

n261. See National Pollutant, supra note 154, at 3025-26.

n262. Id. Note, however, that this argument is not particularly persuasive. Integrator liability does not replace grower liability, but rather provides an additional potentially liable party. Consequently, to the extent that producers are already required to comply, there are no extra costs to pass along. However, integrators presumably would incur costs if the producer was insolvent.

n263. See McBride & Key, supra note 14, at iv; Leland Southard, Mexico's Pork Industry Structure Shifting to Large Operations in the 1990's, Agric. Outlook, Sept. 1999, at 26, available at http://www.ers.usda.gov/publications/agoutlook/sep1999/ao264i.pdf (last visited Apr. 28, 2004).

n264. The question whether small farmers are better stewards of the land than corporations remains open. However, corporations may be more likely to abandon confinement operations than those who live in a local community due to social pressures on the latter and due to the legal protection of corporate officers and board members. See, e.g., Clayton, supra note 233 (describing abandonment of operations).

n265. See Nowlin, supra note 256.

n266. Mark Lawrence, Studying the Impacts of Industrial Confined Animal Feeding Operations, available at www.kerrcenter.com/publications/hogodorreview.pdf (last visited Apr. 9, 2005) (citing P.D. Nunnally, Visions of Sustainable Place: Voice, Land, and Culture in Rural America (unpublished Ph.D. Dissertation, 1989)).

n267. Jim Braun with Pamela Braun, Inside the Industry from a Family Hog Farmer, in Pigs, Profits, and Rural Communities, supra note 1, at 39.

n268. Chen & Adams, supra note 29, at 410-11 (describing farmland as a "hope chest" for future generations).

n269. Id. at 408.

n270. William Greider, The Last Farm Crisis; Farmers Struggle to Survive in Today's Economy, Nation, Nov. 20, 2000, at 11.